

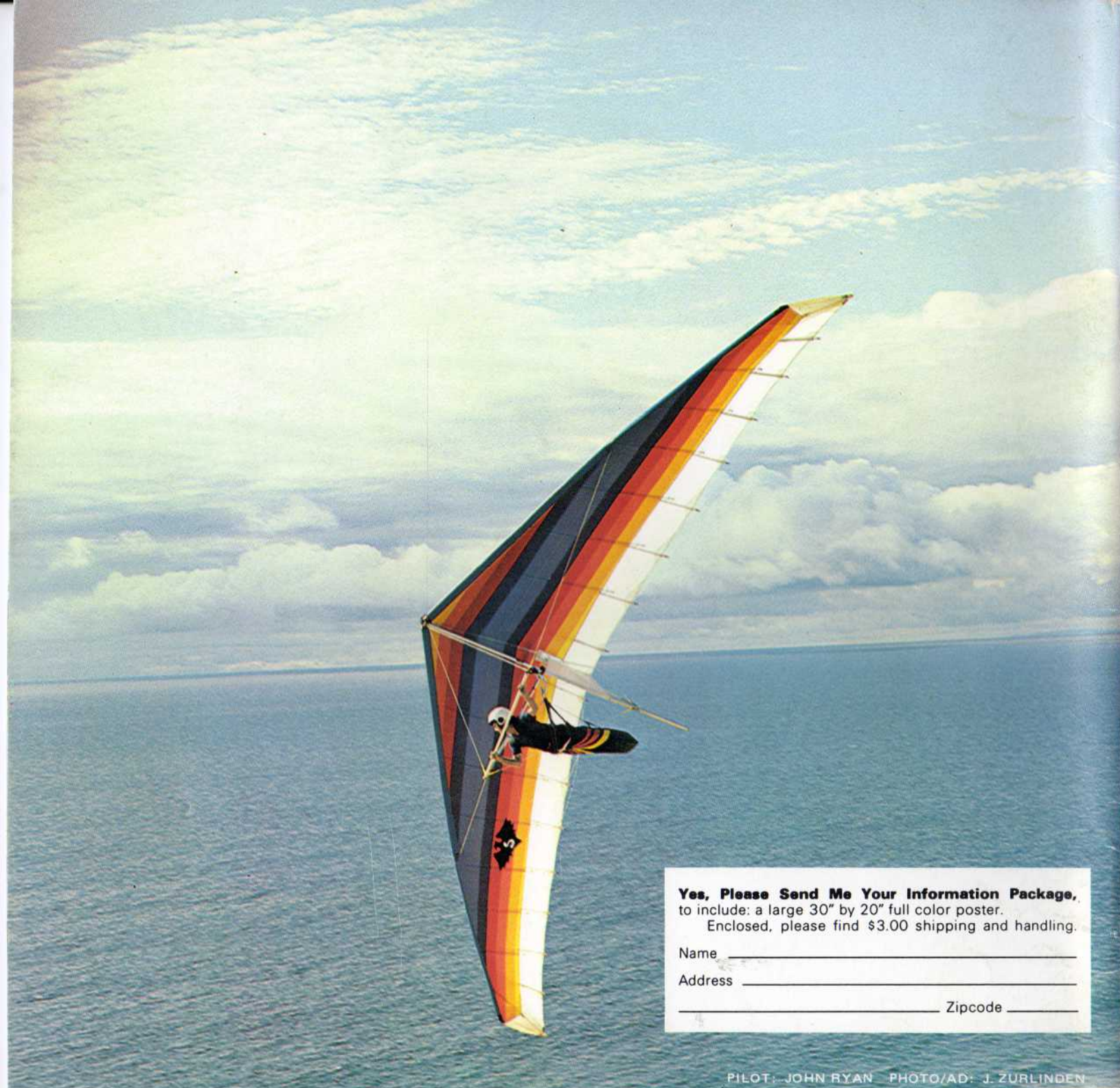
TUDOR'S 221½ MILE FLIGHT — THE STORY

AERO TOWING & THE GERMAN WORLD MEET

WHOLE AIR

The Magazine of Hang Gliding and Ultralight Soaring

September/OCTOBER 1983 — \$2.50



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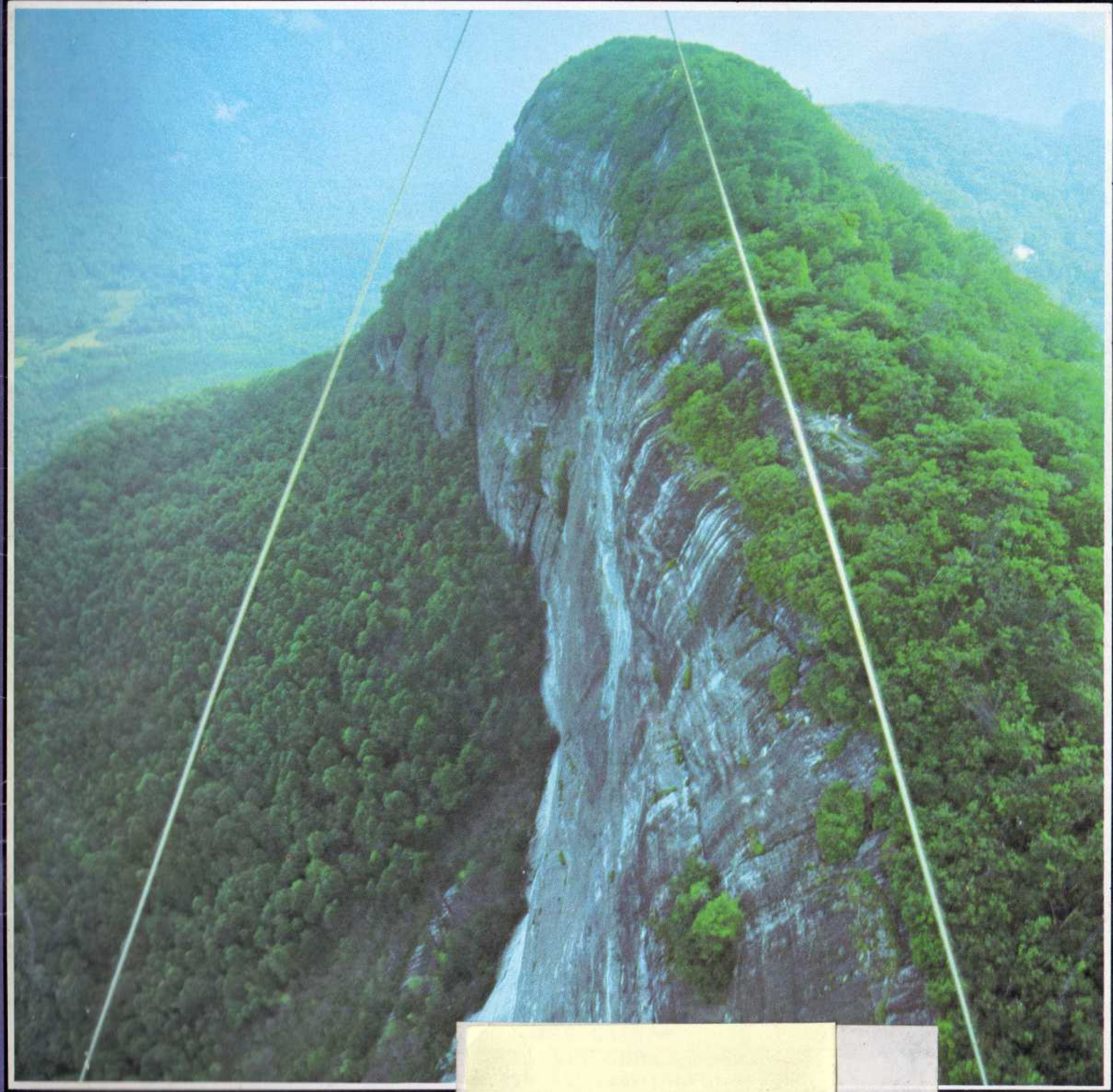
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STREAK

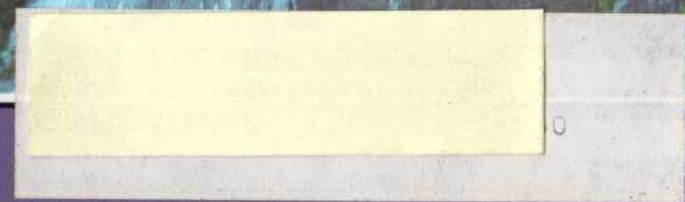
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THE SHADOW

HGMA CERTIFIED, 1983

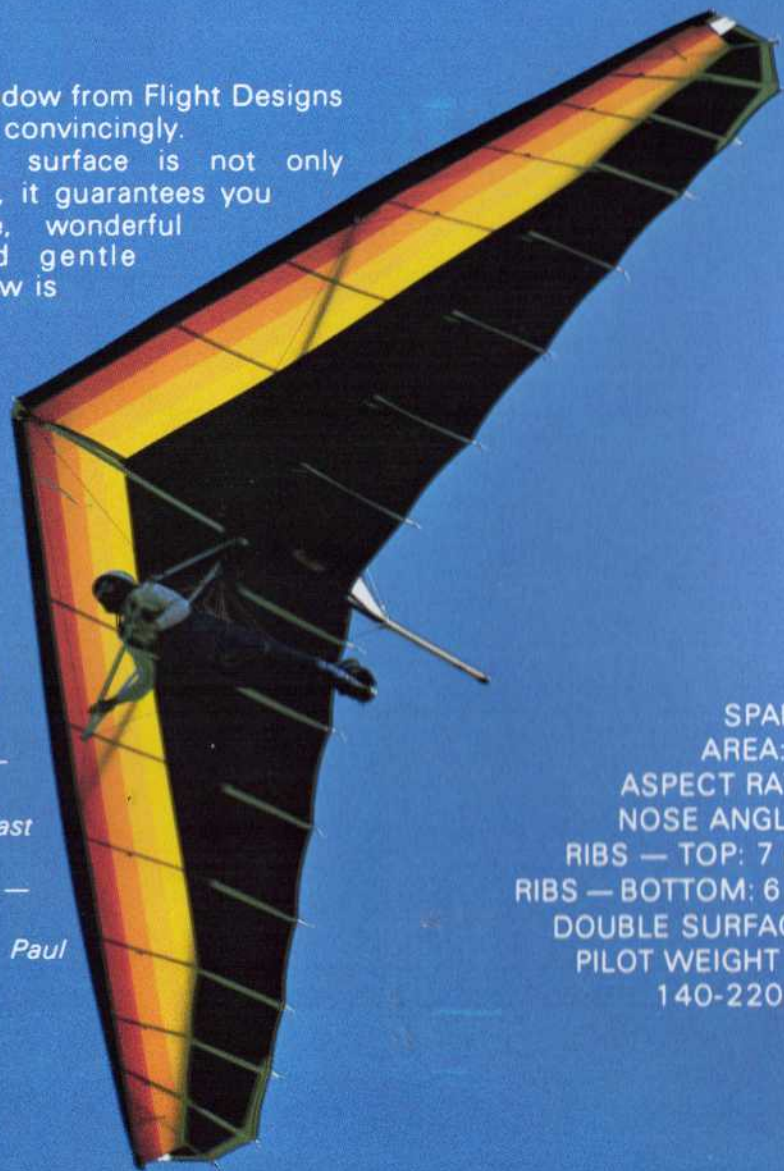
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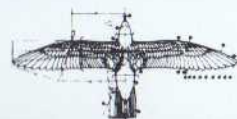
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- *88 Miles — Unofficial East Coast Record*
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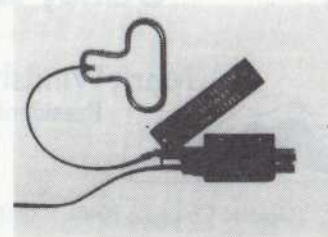
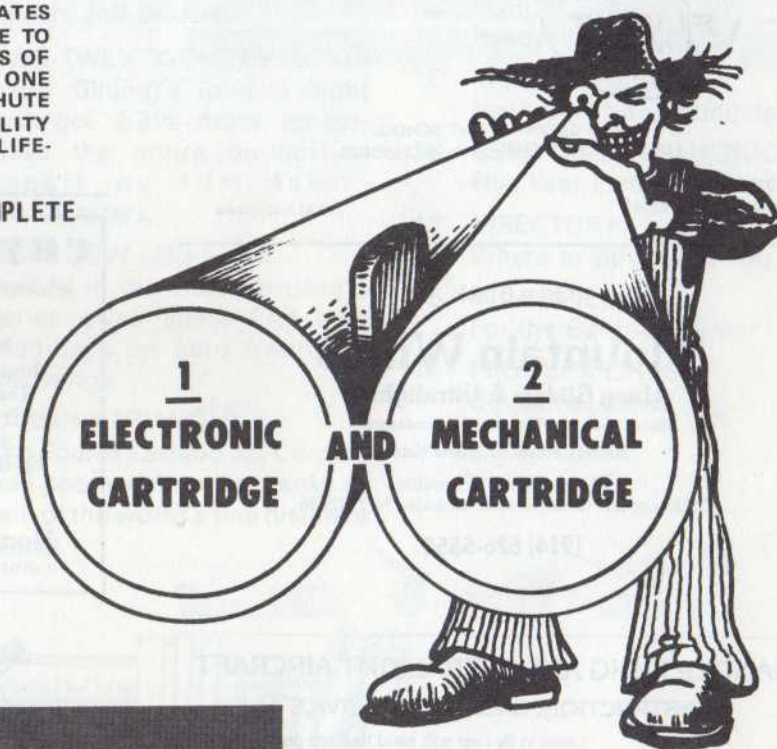
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WHOLE AIR

ISSUE NO. 32, VOLUME NO. 6, NO. 5, 1983

PILOT'S PERSPECTIVE

39 CASMO
Hang Gliding's unique motel is now moreso with a new "Playground Sculpture."

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FEATURES

17 TWO TALES OF TEGELBERG
The 1983 World Meet is described through the eyes of British Correspondent, Noel Whittall, and American Team Coach, Jeff Burnett.

22 TWO-TWENTY-ONE BY TUDOR
Hang Gliding's longest flight just got 53½ miles longer. Read the entire on-location report by film-maker, Rick Masters.

28 AERO TOW LOG
Part IV in our modern towing series gives some first time read-back on aero towing of flex wings.

32 LARIANO TRIANGLE
The Fourth Lariano XC Contest had poor weather, but ranks as one of the world's fine distance meets.

AERO TOPICS

- 4 AERO MARKET PLACES
National Retailer's Directory
- 6 PUBLISHER'S COLUMN
Editorial
- 8 FORUM
Reader Commentary
- 10 INDUSTRY NEWS
News and New Products
- 36 USED GLIDER BLUEBOOK
Five Year Listing Guide
- 42 DIRECTORY
Where to Buy What You Need
- 45 CLASSIFIEDS
For the Bargain Hunter
- 46 PRODUCT LINES
Consumer News





Volume 6, No. 5, 1983
ISSUE NO. 32

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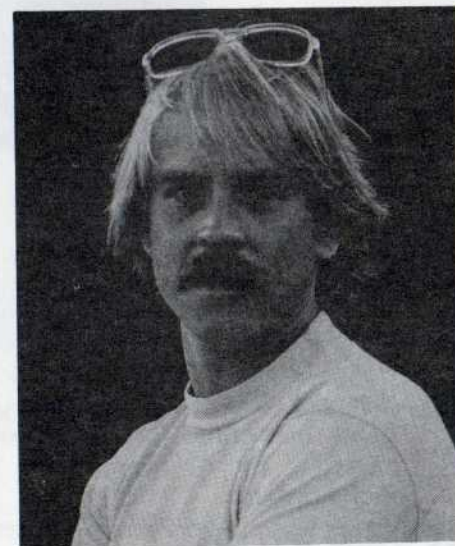
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Chris Voith

On The Cover:

In an unusual view of stunning Andrews Mountain in North Carolina, Chris Voith soars along thousand foot sheer vertical cliffs.

Publisher's Column



SURVEYING

True to form, *Whole Air* continues to learn more from our surveying of readers than by any other single method.

In the July/August issue, our Reader Card had a brief survey about your pursuit of hang gliding, your feelings about the sports' growth (or lack thereof), and your perception of why this change is occurring.

Initial responses were just beginning to arrive as the September/October issue went to press. (This issue had less than the usual two months between issues, as we are evenly making up for lost time due to a lengthy strike-caused delay of our May/June issue.) Still, based on the opinions and observations of some 27 pilots, — have a few ideas of what you think. Very likely, a longer article will offer more validity as a larger number of cards are received.

FLYING UP OR DOWN?

You were split very equally, 51% said their airtime was up, 49% down. Reasons accounting for *more* airtime were better skills, better equipment, more time available, the right weather conditions, and "other ways to fly", meaning airplanes, sailplanes, ultralights, or towing. The last was the largest category at 32%. Explaining *down* flying time, the primary culprit was the weather (48%), followed by "other commitments (25%)." **OTHER ACTIVITIES**

Twenty percent of you resorted to flying ultralights, while 80% did not. Forty percent of you *did* use another sport to compensate, as 60% *did not*. But the biggest change since our last related survey was towing. Fifty two percent are now employing towing. Using the card's

margins, *many* comments listed towing in various beneficial ways, with complimentary language. This is up from only 30% — who had even *tried* it — in a survey some eight months ago.

WHY FRIENDS QUIT FLYING

The single, most common reason cited for why friends quit the sport was "accidents, or fear of accidents/injuries," a whopping 28% of written-in responses. Other rationales included (in order... most to least mentioned): the costs involved; family, wives, or girlfriends; the difficulty — primarily time — of pursuing the sport; the time or distance to flying sites; lack of interest; and other commitments, mainly work related.

GROWTH OR NO GROWTH?

Again split quite evenly, 51% of you view hang gliding growth as *down*, 49% see it growing. But of those who see enlargement, the increase was overwhelmingly in the 0-25% range, with 11% being the average growth estimated. This number is quite vulnerable, we think though, as an eleven percent growth would be very helpful, even if only in half the areas of the country. The industry pulse suggests growth does not approach anything like 11 percent, unfortunately.

REASONS FOR GROWTH PROBLEMS?

Without a doubt, most feel our safety image is still the main problem, as 20% named "fear of injury." But close behind was the "difficulty of pursuing the sport (18%)," or "lack of lesson availability (16%)." Rather tight on the heels of these reasons, however, were the "costs (15%," the "shortage of sites (15%)," and "lack of sufficient publicity (13%)." **Thanks,**

Dan Johnson



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The Magazine of Hang Gliding and Ultralight Soaring

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Outside Magazine, June 1983

"(The Crystal Hang Glider Simulator) is a device which approximates the sensation of flying while keeping the danger extraordinarily slight for the novice. The joy was immediate. It was unforgettable."

Atlanta Journal, July 1983

"(Crystal) has a unique simulator that lets you learn while suspended safely from a cable, and it's been used by students ranging in age from 5 to 81."

Orlando Sentinel, July 1983

"Students (are) all coached by a top instructor who helps the launch and follows the flight with safety brake handle in hand. Should the student enter a stall with inappropriate recovery, this instructor can remotely aid the effort via the brake and the tow rope attached to the rear of the custom-made simulator glider."

Hang Gliding Magazine, August 1983

"Tethered safely to the overhead cable, the Crystal Hang Glider Simulator offers an opportunity for experienced pilots to practice actual in-air deployments."

Glider Rider Magazine, June 1983

"... the Crystal Hang Glider Simulator in Tennessee, has helped in learning to use emergency parachutes."

(British) Wings! Magazine, May 1983

"Crystal Air Sports Real Air Deployment Seminars (are) conducted on a hang glider, which is suspended from a long overhead cable ... to teach hang glider and ultralight pilots the real-time requirements of getting a parachute out and open in an emergency."

Ultralight Aircraft Magazine, July 1983

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FORUM

Dear Editor:

Hang glider pilots, what has happened to our sport's only child, motorized hang gliders? Why, we got diverged, maimed, and killed doing R & D, just to hand it over to those friendly General Aviation types! Johns-Windsor, Lake, Moody, Soar-master, and Gemini. All this pioneering work turned to airplanes. The more they looked like airplanes, the more the FAA treats them as such.

Why did we want motors on our gliders? You know the story; not enough sites, weather, airtime, etc.

How did General Aviation take hang gliding's baby away? Easy, we had a reluctant father, the USHGA and its membership. Reasons? Dad said the Kid was ugly, with noisy, polluting motors, but worse, keeping it meant restricting regulations. So, give the Kid away and be free, huh?

The rest of the story is well written, and it's in the past. What do we do today? Hang gliding isn't growing like it was. It needs a pick-me-up. Towing with what? Our estranged Child? Let's face it. We need ultralights.

The answer: Trikes now, and prone trikes and other motorized hang gliding development in the future. Jim Theis, please don't give up on the Nighthawk.

USHGA, you've got (Part) 103 to live with anyway. When you look at England (over 50% of ultralights are trikes), it seems that we are doing something wrong. Until now, it's been a lack of a two-seater law. Trike people do not belong with EAA or AOPA. We are hang glider pilots and belong with the USHGA. Trikes need its support and the USHGA could sure use its growth potential.

I think the USHGA should re-adopt its ultralight program to handle motorized hang gliders, trikes, etc.

Hang glider pilots! You've probably never flown a trike. Boy, are you in for a pleasant surprise! Don't believe all the bad words you've heard; it's simply not true. These things are great! Trikes are hang gliders, the "less is more" philosophy. And what about a prone trike? Ask Pete or Bill, Rob, Bob, Kent, Dick, or the American Stock Exchange; demand your ATV, prone!

Manufacturers! I've already trained two non-hang gliding pilots to fly in no time, using a two-seater. They are easier to fly than three-axis ultralights. Look at their virtues: price, portability, maneuverability, etc. Don't believe? Take a vacation in England. Now we have a two-place law. [Legal two-seat instruction for hire is now

possible, via an ASF registration.]

Again, the USHGA really should re-adopt motorized hang gliders and provide the necessary programs.

Brian Whelan,
V.P. — LIHGA,
North Bellmore, NY

To Do, or Not To Do ...

Dear Editor:

I believe that there are enough ads in *Whole Air* without adding 18 pages under the guise of a "Buyer's Guide."

I certainly hope this isn't an annual thing.

Unsigned,
Ft. Worth, TX

Dear Editor:

(referring to the May/June 1983)

Great issue! Why don't you put some sort of Accessory Catalog in every issue. Some of us have to rely on one dealer.

Dave Aston,
Hartford, CT

Successful Auto Tow

Dear Editor:

I would like to report on a successful auto towing system built by Warren Richardson and myself from Gary Whitman's specifications in the May issue of *Hang Gliding Magazine*.

A half dozen local pilots made smooth climbs to 700 feet. The system is complete as described in the *Hang Gliding* article, and the single Schweizer release is more reliable than the dual auto release methods.

A hydraulic cylinder and gauge tension meter made the driver's job a precise one. The wheels can be necessary in light winds.

I would recommend to anyone wanting to put together a tow system, to resist the urge to "re-invent the wheel," and go with a complete proven system.

Scott Whittet,
Dallas, TX

Thanks!

Dear Editor:

Late last spring, after a mountain flight, a hard landing proved to be very painful requiring hospitalization. I was very deeply touched by the genuine caring and thoughtfulness of the Tennessee Tree Toppers, Tom Phillips, Matt Tabor, and the Florida Pilots who came to my rescue. I think they deserve a pat on the back.

I hope you can help me share my deepest appreciation to all of them.

Barbara Flynn
Orlando, FL

What of Safety?

Dear Editor:

Recently saw three major accidents, a number of minor accidents, and an even higher number of near-accidents at Tater Hill (Boone, NC) in two days.

I'm concerned that people don't know or don't practice good safety techniques in their flying. I was amazed that people were unable to make decent landings, tried to land downhill rather than uphill, just so they could be *into* the minimal wind. People made low, tree- and powerline-skimming approaches; made low, slow 360's into hills; did not follow rules of the ridge.

Maybe we need emphasis on safety for a while!

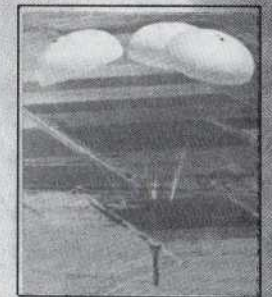
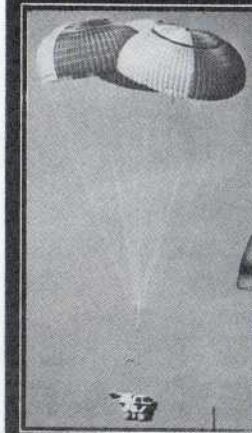
Thomas Morgan,
Greenville, NC

Persons wishing to respond to letters are welcomed to do so ... the dialogue can help. *Whole Air* will print all letters of interest to the soaring community. —Ed.

ADVERTISER'S INDEX

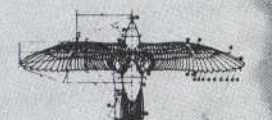
B & B Enterprises	40
Bennett Delta Wing	47 (IBC), 48 (BC)
Ballistic Recovery System	3
Crystal Air Sports	8
Crystal Air Sport Motel	16
Eastcoast Glider Accessories	16
Flight Designs	2 (IFC), 9, 37
Hurst Swiss Alp Safaris	15
International Sailboards	40
Leading Edge Air Foils	15
Pacific Kites	33
Progressive Aircraft	38
Raccoon Mtn Flight Resort	8
Rising Star Gliders	16
Seedwings	11
U.S.H.G.A.	41
Whole Air	7
Wills Wing	12, 13, 35
Wolfe Aviation	41

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1983 Nationals Results

The 1983 U. S. Nationals Hang Gliding Championships were completed this past week at Dunlap Flight Park, Dunlap, California. The official results were released on Thursday, August 18th.

The contest was held August 6 through 16 during which 92 hang glider pilots flew thirteen rounds of One-on-One competition. (Note: Two pilots launched simultaneously from two launch ramps.) The contest site was a 2,800 foot mountain located 55 miles east of Fresno, in the western foothills of the Sierra Nevada Mountain Range.

The 92 competition pilots were divided into two classes in accordance with USHGA standards: World Class and Sporting Class. Sixty four pilots were in the World Class and 28 flew in Sporting Class. Only five foreign pilots were permitted entry into this year's Nationals. Following are the results showing only the top category winners:

World Class Champions

1st — Chris Bulger . Streak 180
2nd — John Pendry (Britain) ...
..... Airwave Magic III
3rd — (Seven way tie)
Jeff Huey Attack Duck
Rick Rawlings Attack Duck
Rob Kells Attack Duck 180
Kevin Kernohan Comet 2
Steve Moyes Missile GT
Rich Pfeiffer Streak 180
Eric Raymond Comet 2

Tudor Sets Straight Line Distance Record

Well known U.S. pilot Larry Tudor broke the World's Straight Line distance record for foot launched gliders on July 13th, 1983.

Tudor, 29, a professional competition glider pilot from Draper, Utah, flew his UP Comet 2 glider 221½ miles to break the existing two year old record by an astounding 53½ miles!

Tudor launched from the east side of the Sierra Nevada mountain range at a location called Horseshoe Meadows, above the town of Independence, California.

At 8:30 in the evening, after ten hours of flight, Tudor was forced down by fading light. A jubilant ground crew lead by documentary film maker, Rick Masters, greeted the tired but happy Tudor 7.6 miles north of Austin, Nevada. The entire effort from launch to landing was recorded on film for an upcoming documentary on self-launched flight. Tudor also collected the \$5,000.00 "UP Prize" offered by Ultralite Products to the first pilot to fly over 200 miles in a hang glider.

INDUSTRY NEWS

Sporting Class

1st — Lee Fisher .. Sensor 510
2nd — Paul Robins .. Comet 2
3rd (Four way tie)
Paul Clarke Comet 2
Tom Vayda Fledge III
Raul Mazzoni Duck
Dudley Meade Fledge III
7th (Two way tie)
Terry Wilkins Duck 180
John Woivode Comet 2

1983 National Champion

(By merit of CPS Points accumulated from the three best meets of the year, including this National Competition)
Rick Rawlings Attack Duck 180

SECOND RUNNER-UP

Stew Smith Sensor 510

Sportsmanship Award

Terry Ferrer Moyes Mega
FOR: Saving his opponent's life, after he (Rick Wade) overshot the landing zone on landing and landed in the middle of the lake.

Salmon Award

Rick Wade Streak 180

Landing Award

FOR: Best landing points score of meet.
Howard Osterland Espirit

ADDITIONAL NOTE

During the Nationals, Rick Rawlings (National Champion), Chris Bulger (World Class Champion), and Steve Moyes (World Champion -- F.A.I.) received invitations to compete in the International Camel Cup Hang Gliding Championship to be held in Rio de Janeiro, Brazil in October this year. Air fare tickets for the three recipients will be provided by the R. J. Reynolds Tobacco Company.

Hardy Snyman,
Newswriter

Whitehawks Film Available Soon

Sierra Whitehawks' new promotional film, "The Whitehawks," will be available for purchase by the general flying community beginning October 1st. The twenty minute film contains spectacular footage of the Whitehawk 185-A and 160-B models in action. A short tour of the factory and detailed close-ups of the glider's frames and sails, inside and out, help to show what the Whitehawks are all about.

The film then shifts to footage of actual test flights of a number of A's and B's being put through their paces by pilots Craig Beck, Doug Cook, and Terry Cook. Included in the film are sequences of the

Whitehawks performing whip stalls, chandelles, wing-overs, aggravated spins with hands-off recovery and multiple loops. Good close-up photography demonstrates the operation of the Whitehawks unique elevon/dive brake system. The film will be made available in either 16mm (with magnetic or optical sound), Super 8, or in video cassette.

For more information, contact Craig Beck at Sierra Whitehawk, P. O. Box 79, Tahoe Vista, CA 95732, or phone 916/583-6136.

Launch Checklist

(Excerpted from the Cloudbase Country Club Newsletter, No. 33)

It has been noticed that some people are becoming lax in static checks and even when there is one, not everything is checked out.

Some of the things to check out are:

- Leg Straps/ Are both legs in? Twisted? Straps in good condition?
- Hang Loop/ Is it twisted? Karabiner all the way through? Is it in good condition?
- Karabiner/ If locking, is it locked? Is it closed all the way, no portion caught on the hang loop?
- Ropes/ Are they in good condition? In the proper place?
- Chute/ Is the lanyard (bridle) attached in the karabiner? Are all of your rubber bands in place and in good condition?

Thanks to Editor, Beth Little for the above hints. Hook in!

Australia To Host Mt. Buffalo Cross Country Classic

Once again, Australia is hosting the Mt. Buffalo Cross Country Classic. The Classic is Australia's premier hang gliding competition, and is held in some of the most spectacular country anywhere. Mt. Buffalo is a 3,200 foot launch located next to the Chalet. It is located between the northeast Victorian plains and Bogong highlands, part of the Great Dividing Range.

The Classic will be held from December 28th, 1983 to January 5th, 1984. Pilots wishing to compete in the Classic should apply in writing to: Mt. Buffalo X-C Classic, 15 Heather Ave., Ashwood, 3147, Australia. Please enclose a US\$50 entry fee. Applications for overseas entries close on November 1st.

Closely following the Classic will be the OZ Nationals, to be held at Ben Nevis, Victoria, from January 7th to the 16th. This will be followed by the Mt. Horrocks Challenge in South Australia and the Lawrence Hargrave International in New South Wales. Australia offers superb cross

country flights. On one day at the last Classic, ten pilots (one-fifth of the field) completed a 102 kilometer circular course. A 55 kilometer task at the last Nationals (at Ben Nevis) was completed by half of the pilots, with an average speed of 36 kmph. Meanwhile, at Mt. Horrocks last season, there were two flights in excess of 160 kilometers (100 miles). Less than fifty flights have been made from this site.

Whether you are into cross country or competitions, you should be in Australia from December to February. I am sure you would not be disappointed.

Wesley Hill,
Classic Organizer

Owens Valley Center Opens New Outlet

The Owens Valley Hang Gliding Center, organizer of the famed XC Classic, is proud to announce the opening of the new branch office at the Lone Pine Airport.

At the base of both the Horseshoe Meadows and Cerro Gordo launches, the new office number is 619/876-5317. [See maps, pgs. 24 & 25 for this location.]

NUMBER ONE BY DESIGN



Pilots: David Ledford, 1982 Masters Champion
Robert Trampenau, Seedwings President

photo by Leroy Grannis

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Hang Gliding vs. Skydiving Fatalities

Like skydiving, the sport of hang gliding had an extremely satisfying safety record in 1982: fatalities dropped from an all-time high of 40 in 1974 to just 12 in 1982. (The United States Parachute Ass'n, or USPA meanwhile recorded 29 fatalities last year, down from highs of 53 in 1976 and 1979.)

Officials in both sports speculate that the plunging economy had something to do with the decrease; fewer people seem to be able to afford to pursue these rather expensive weekend diversions.

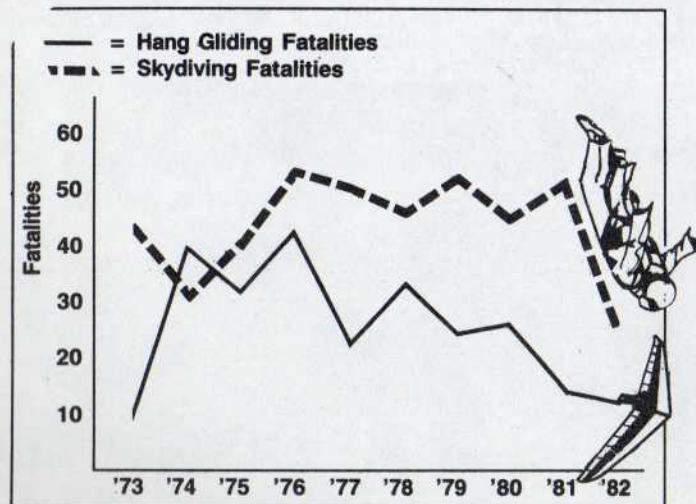
Fatality records from both sports show that students and novices are among the most likely to lose their lives while participating. Some 50 percent of hang gliding fatalities in 1982 involved students, while 41.5 percent of skydiving fatalities involved those with less than 75 jumps.

Beginners in both sports face a common problem: trying to adapt to a new and different environment, which leads to problems in emergency situations.

How is the USHGA combating the problems that face hang gliding pilots? By putting added emphasis on ground school and practice and revising older training methods currently in use.

Similarly, everyone involved with instructing and supervising student jumpers should constantly review their methods, seek out areas of potential improvement and try to upgrade the quality of equipment that students use.

[Excerpted from the July 1983 Parachutist, the official publication of the USPA; sent to Whole Air by Terry Ferrer.]



Chasing a downward trend: While hang gliding fatalities have traditionally been well below skydiving fatalities, both groups recorded very few fatal accidents in 1982.

INDUSTRY NEWS

Moyes/Australians Take The Gold, Stew Smith Captures Silver, US Team Gets Bronze

(From a copy of the Release sent to all sponsors of the World Cup Team)

Australian Steve Moyes is the new World Hang Gliding Champion. Moyes established an early lead in the ten round competition, avoided zeros in rounds that were easy to zero, and turned in his usual amazing display of pilot skill, judgement, and consistency in winning his first World Championship. The rest of the world tried but no one could match Steve's performance. He is a champion in every sense of the word.

In an exceptionally strong performance, our own Stew Smith blew past Englishman Graham Hobson in the final round to capture the individual silver medal. Stew's performance was similar to Moyes' in that he never zeroed a round, always flew well, and made few mistakes. After the meet, Stew was quick to credit his American teammates for their moral and technical support throughout the meet.

What about Pfeiffer and the rest of the guys? Well, Rich flew nine out of ten great rounds. Trouble was he never could overcome the zero he got in Round One. As it was, he showed "true grit" in a nearly miraculous comeback and wound up in fifth place. Mark Bennett and Chris Bulger barely missed the final cut to sixteen, finishing 18th and 19th respectively. Gene Blythe was 47th and Kevin Kernohan 73rd out of a total field of 148.

What about the team standing? Well, they were based on the

scores of each team's top four competitors. The Australians proved to be far and away the best team. Incredibly, they placed four pilots in the top ten. Great Britain and the USA finished second and third respectively, with Canada coming in fourth.

So, despite a lack of gold, the United States performance at Tegelberg was the best ever by an American team at a World Meet. Stew Smith's individual silver medal, and a bronze team medal were the payoffs for a strong and determined effort that you, as a grass roots team sponsor, made available.

The 1983 USHGA World Team sincerely thanks you for your support. And yes, several months down the road you will be hit up to contribute to "The Drive for 85." Eric Fair

(See the complete story on the Tegelberg World Meet beginning on page 17 of this issue.)

Vorhees And Miller Join HighCraft

Two more hang gliding names become associated with ultralighting as HighCraft Aero-Marine of Florida announces the addition of Eric "Easy" Vorhees and Rex Miller to their staff. HighCraft manufactures the new Buccaneer ultralight.

Easy Vorhees comes from a long ultralight experience starting in 1976 with the original motorized Quicksilver company called Hang 'Em High Flight Systems. Easy then worked with Lafayette Aviation (now renamed Advanced Aviation) in the development of the Hi-Nuski aircraft. Following that, Easy was employed by Seahawk Industries in Miami Florida, the manufacturers of the Condor ultralight. Easy has also been heavily involved in hang gliding for nine years and has won the Cypress Gardens World Invitational Towing Championship in 1979. He also flew in the Masters of Hang Gliding competition at Grandfather Mountain in 1981.

Rex Miller comes from a long background of hang gliding experience working for Manta Products in Oakland, California in the development of the Fledgling series of rigid wing hang gliders. Rex has developed the Fledge III and Fledge III ET and was a pioneer in aerial towing of hang gliders by ultralight.

O'Haco Wins South American Meet
ARICA, CHILE — Jean Pierre O'Haco flying a UP Comet 165

Story filed by Carlos Claussen, Santiago, Chile

defeated 63 pilots to win South America's first major meet of the 1983 flying season. O'Haco, a top pilot from the northern Chilean city of Arica, had a "locals advantage" over most of the southern pilots who came from Santiago, Chile, some several hundred miles to the south. In addition to the high percentage of Chilean pilots, there were several foreign pilots from as far away as Brazil, Argentina, and Columbia.

Chile's *Campeonato Internacional de Alas Delta* was held as an "open" meet with no distinction made between rigid and flex-wing foot launched hang gliders. For the first time in South American competition, open distance XC events were included as a major part of the competition. A full 80% of the tasks were point-to-point races with the remaining 20% being the traditional "general abilities" tasks that are so familiar to most hang gliding spectators.

Winner O'Haco, an "unknown" when he flew in last years XC Classic in Bishop, California surprised the world class South American pilots when he stated that the Owens Valley had very similar conditions to those in Chile, and that he felt right at home flying cross country tasks in that area.

Evidently, O'Haco learned quite a bit at the Owens last year and applied it well to win this event. Second place went to Carlos Claussen from Santiago, Chile. Claussen also flew a Comet. UP gliders did extremely well having six finishers in the top twenty.

It was a truly international meet, as more than fifteen types of gliders from six different countries were flown. The highest placing fixed-wing was Francisco Correa of Santiago, Chile in a Fledgling. Alois Sgier from Brazil flying a Piranha was 3rd, with Gabriel Perez of Serena, Chile in a Wills Harrier in 4th place. Mauricio Cotten in a Comet rounded out the top five places.

An interesting addition to the story came when O'Haco and Claussen realized that they would not be able to go to Tegelberg, Germany for the World Championships because the rate of inflation in Chile has more than doubled in the last year. The carefully preplanned travel trip to the winner of this event evaporated at the last moment when the World Championship budget was literally cut in half. Hopefully, financing for O'Haco, Claussen and one other pilot will come through for the 1983 XC Classic in California so these top world class pilots will be able to compete against other major foreign competitors.

Telluride Hang Gliding Classic/Airmen's Rendezvous '83

The Telluride Air Force is proud to announce the tenth anniversary celebration of the Telluride Hang Gliding Classic/Airmen's Rendezvous '83. Hidden in the picturesque San Juan Mountains of southwest Colorado and listing in the National Historic Registry, Telluride is an emerging world-class resort offering the most breathtaking scenery in North America and the most exhilarating hang gliding in the world.

The Telluride Hang Gliding Classic, scheduled for the week of September 12 through 18, is an internationally acclaimed event attracting advanced pilots from around the globe. The non-competitive air show program features smoke-traced aerobatic demonstrations, formation flying and women's teams, a twenty-five mile closed course cross country challenge, a powered ultralight display and ground school for spectators. Two hundred pilots are expected to launch from 12,250 foot Gold Hill, thermal soar to great heights, remain aloft for several hours, and finally, land in the town park/landing area. Spectator festivities in the park include live music, a dance performance, Autumn leaves drop, Peach Flights, radio and speaker program, a tasty barbeque, and delicious refreshments.

At night, a guest speaker program is offered that has featured in the past Brigadier General Charles "Chuck" Yeager of X-1 fame, Dr. Paul MacCready, designer of the Gossamer Condor, Albatross, and Solar Challenger, Hugh Morton of Grandfather Mountain, John McNeely and his Hawk, and Department of Wildlife pilots, Gordon Saville and Lloyd Hazzard. This year's guest is Tom Peghiny, one of the pioneers of our sport.

Tom Peghiny began flying and designing at the age of thirteen. He was the first sponsored professional pilot and has thirty-

INDUSTRY NEWS

three major victories. He helped write the first airworthiness standards for hang gliders and is presently doing the same for powered ultralights. He is on the Executive Board of PUMA, the Powered Ultralight Manufacturers Association, and is one of the leading designers in that field today. In addition to Peghiny, a "Mystery Guest of Great Importance" is planned.

For more information on the Telluride Rendezvous, call Jack Carey at 303/728-4759.

Higdon Joins AOPA Public Relations Division

Aircraft Owners and Pilots Association has appointed David Higdon communications specialist in the association's Public Relations Division.

Higdon, formerly the staff reporter for *Glider Rider*, ultralight aviation's oldest publication, assumed his duties in June, according to Charles Spence, senior vice president of the 265,000 member association.

An authority in the arena of ultralight aviation, Higdon will participate in the association's continuing efforts on behalf of more than 7,000 Ultralight Division members, as well as AOPA's extensive general aviation representation.

Higdon, a former newspaper reporter, spent nearly two years covering ultralight aviation's growth and change for *Glider Rider*, a monthly publication with more than seven years experience in this fast-growing field of aviation.

His background includes broad experience as both an active hang glider and ultralight pilot, in addition to general aviation flying.

Higdon is a Navy veteran, and

earned awards for investigative reporting while still in college. He holds a bachelors degree from Indiana University in his native state, where he graduated in 1981.

Texas Cup Championship

Texas Oilman Jack Grimm turned his attention from "The Search for the Titanic" over Labor Day weekend when he sponsored

the 3rd Texas Cup. The meet is held at Buffalo Gap, just south of Abilene. Grimm backs the contest with a \$5,000 purse and provides his own mesa for its running.

This was an invitational competition in which top-ranked Texas pilots fly with such notables as World Champ, Steve Moyes. Flyers from Texas include Regionals winners Steve Stackable, Steve Burns, Gordon Cross, and Steve Brenner. The contest is directed by original organizer, Michael Winston Williams, running Sept. 2-5, 1983. All flying is done from Grimm's 350 foot mesa.

Whole Air plans to have some results in the Nov/Dec issue.



Tim Enright (left), Director of the Lotus Car company, and Lucky Campbell, Vice President of Eipper Aircraft, shook hands after signing an agreement to work together to develop and manufacture light planes and powerplants. Behind them is a portrait of the late Colin Chapman, who initiated the association with Eipper President Lyle Byrum.

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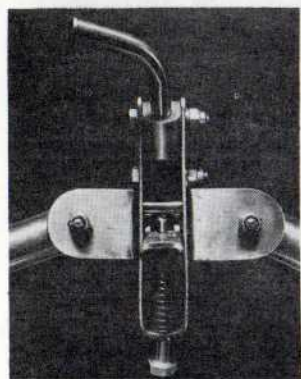
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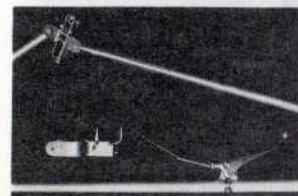
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Photos by Chris Voith

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The Bunkhaus

THINKING ABOUT OUR Fly-Work Program? Here's the deal:

First to explain the busy part: We require 15 hours of work per week (on non-flyable days), in exchange for a bunk in our flier's BUNKHAUS. The type of work is in accordance with your skills as the maintenance of our resort requires many talented hands.

We also ask for a 'happiness deposit,' (we're happy to get it and you're happy to get it back), of one month's rent, \$120, that is promptly refunded on a weekly basis or end of the month basis, as your hours are completed. Please, we ask that your stay with us be a minimum of one month.

Now for the picturesque part: Our BUNKHAUS is a spacious 12 bunk room with two complete shower/toilets, with color T.V. and In Room Movies! Our resort is located in Raccoon Mtn Valley, surrounded by mountain ranges. We are situated on 6 acres of uniquely terraced land, one of the highest points is located in the BUNKHAUS; 4 acres are made up of densely wooded terrain. We are even considered in the 'country,' yet we are only 10 minutes from beautiful downtown Chattanooga via expressway.

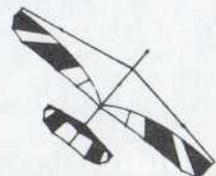
Crystal Flight Resort is within walking distance as is the new Alpine Slide, Water Slide, and Horseback Riding.

Since the Fly-Work Program was initiated, many of the fliers that have permanently made Chattanooga their home, have stayed and worked with us, while getting themselves situated job-wise in nearby areas.

Now for the 'party' part: The relaxed atmosphere, convenience of flying sites, and all-around hassel-free environment have brought CASM Motel guests and BHers back again and again.

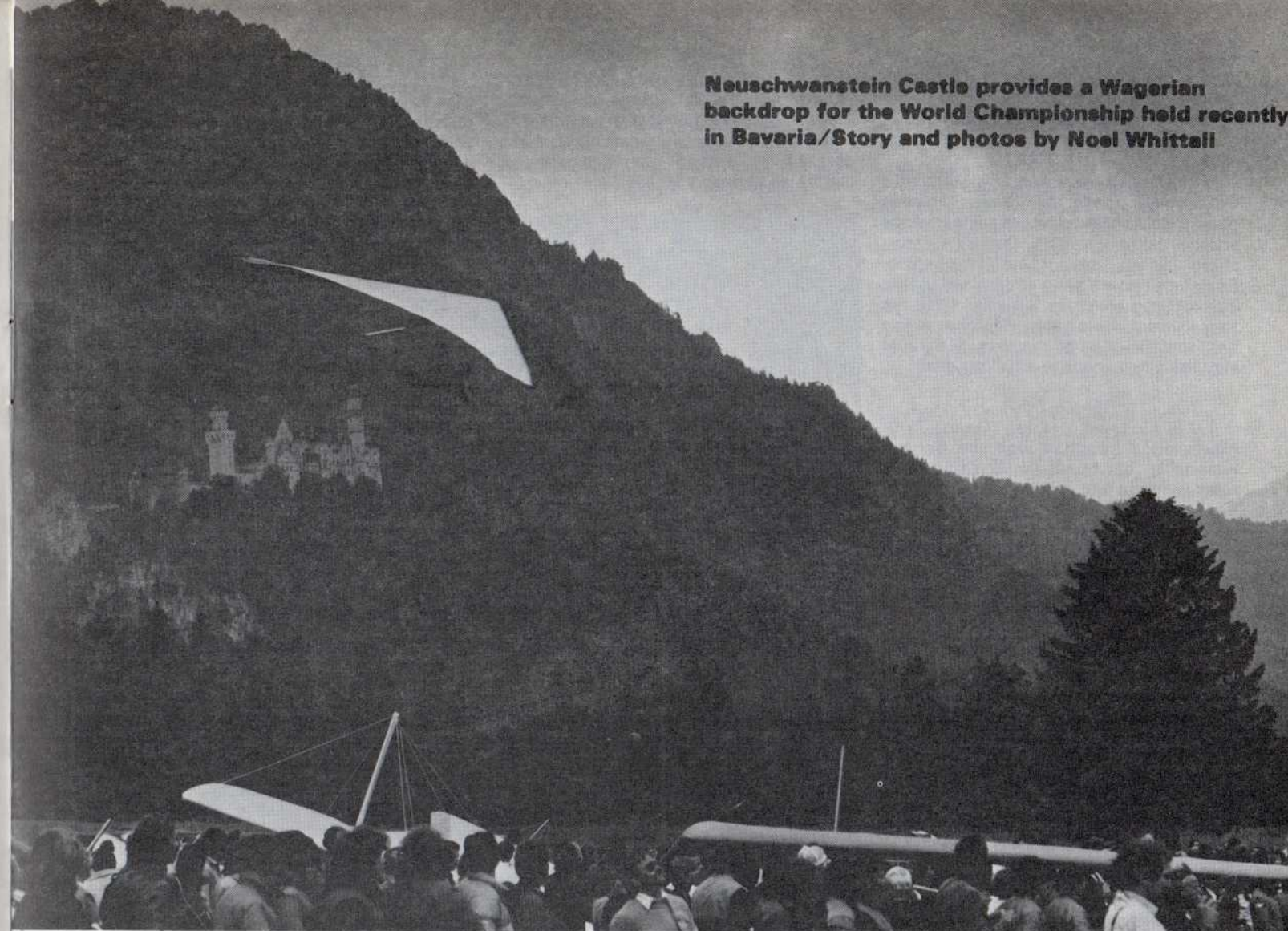
Restaurants and shopping areas are located nearby and should you require transportation, it is available.

So, if you should have some constructive time on your hands, are self-supporting for a reasonable time, and want to get that flying time in that you've always dreamed about, please contact us as soon as possible.



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Neuschwanstein Castle provides a Wagnerian backdrop for the World Championship held recently in Bavaria/Story and photos by Noel Whittall



**THE 1983
 WORLD CHAMPIONSHIP**

Whichever way you set it out, the Aussies won, and credit must go to Steve Moyes and his irrepressible gang for beating the rest of the world. Steve has won everything else in hang gliding at one stage or another, and surely nobody will begrudge him the World Crown at last. It is a fair reward for years of all-round excellence.

SCHWANGAU

The Tegelberg site at Schwangau in Bavaria is a superb setting for hang gliding. It is where the plains of Europe start to pucker up into the Alpine ranges which stretch west through France and east towards Russia. The north-facing ramps are about 2,700 feet above the abundant landing fields. The cable car system

handled the transportation of all the gliders extremely well, and apart from inevitable congestion in the very restricted set-up area, everything went off as well as could be expected at any site with no road to the top.

That pilot's preoccupation — the weather — gave a virtuoso display of inconsistency: high 90's and booming thermals in practice week, then rain, rain, rain topped with six inches of snow at take-off at times during the competition.

Much of the local architecture is middle-period Disney as pioneered by the luckless King Ludwig III, whose enthusiasm adequately compensated for his lack of taste or discretion. His most celebrated monument is the Castle of Neuschwanstein over which our hang

gliders soared to the delight of both tourists and pilots alike.

"PIFF-PAFF"

The 1983 Championships catered only for Class I gliders — i.e., Flexwings. No Fledges, no Arrows, nothing radically new, which was a disappointment. I love flexwings and have no wish to see them superseded, but it would have been interesting to see just how far along the road towards foot-launched sailplanes some of our designers are getting.

Technically the most obvious new feature to have gained much acceptance was the "Double French Connection," also called the "Piff-Paff" by non-English speaking fliers. At the expense of a certain degree of mechanical complexity, this

system provides a roving hangpoint which lightens both roll and pitch. Some of the new stiffer wings obviously require it.

TIGHT START

The British team flew the Magic III's exclusively. These beautifully finished gliders do appear to be the fastest wings around, although Rich Pfeiffer's razor-sharp Streak cannot be far behind. Remember how a hang glider used to take up its flying shape as the wind filled the sail? Current competition machines are so tight that they start off that way, and would stay the same shape in a luffing dive!

DEAN'S DISH

U.S.A. team leader Dean Tanji expressed satisfaction with the German hospitality, but found the Championship rules easier to interpret than the menus. In a group eat-out, he lost heavily on points to Hungary, whose rump steak looked much more appetizing than Dean's lonely and insipid single sausage dish.

FALHAWK CRUISIN'

A highlight of big international meets is the occasional opportunity to fly exotic gliders at exotic sites. This year my luck was in, in the form of Yoshiki Oka's Falhawk Cruiser 170. By English standards this machine is pig to rig, but fine to fly. A fairly orthodox CFX (*Concealed Floating Crossbar*) design, it boasts fewer battens than its predecessor, the Blazer, but a flatter sail and sharper tips. Nose angle is 130°, and a number of other competitors were generous in their praise of its performance at minimum sink speed.

When I flew, conditions were not very smooth, and I noticed that the nose wanted to drop off to one side as soon as the trim of the glider was disturbed. At first I tried to correct this immediately, even if I was in the middle of winding on my camera. However, I soon found that recovery was easy and immediate, and so sometimes let the machine get more out of hand than is usual. I apologize to Falhawk if the resulting far-from-smooth flight gave the onlookers the impression that I was enjoying a right royal wrestle with the glider!

Falhawk detail is very good. I particularly liked the neat locating pip pin for the nose batten, with its simple zippered access port. The sail cut is also very good, the tips remaining wrinkle-free and well defined at all times without needing any extra strong compression-strut battens to keep them that way. Although different in appearance, the Cruiser had much of the feel of the Sensor in the air — no great surprises, but a slightly "different" feel. Re-designed to rig with a nose-catch rather than its current rather awkward sliding center box plus tensioning device, it is a glider I would be very happy to fly on our hills here.

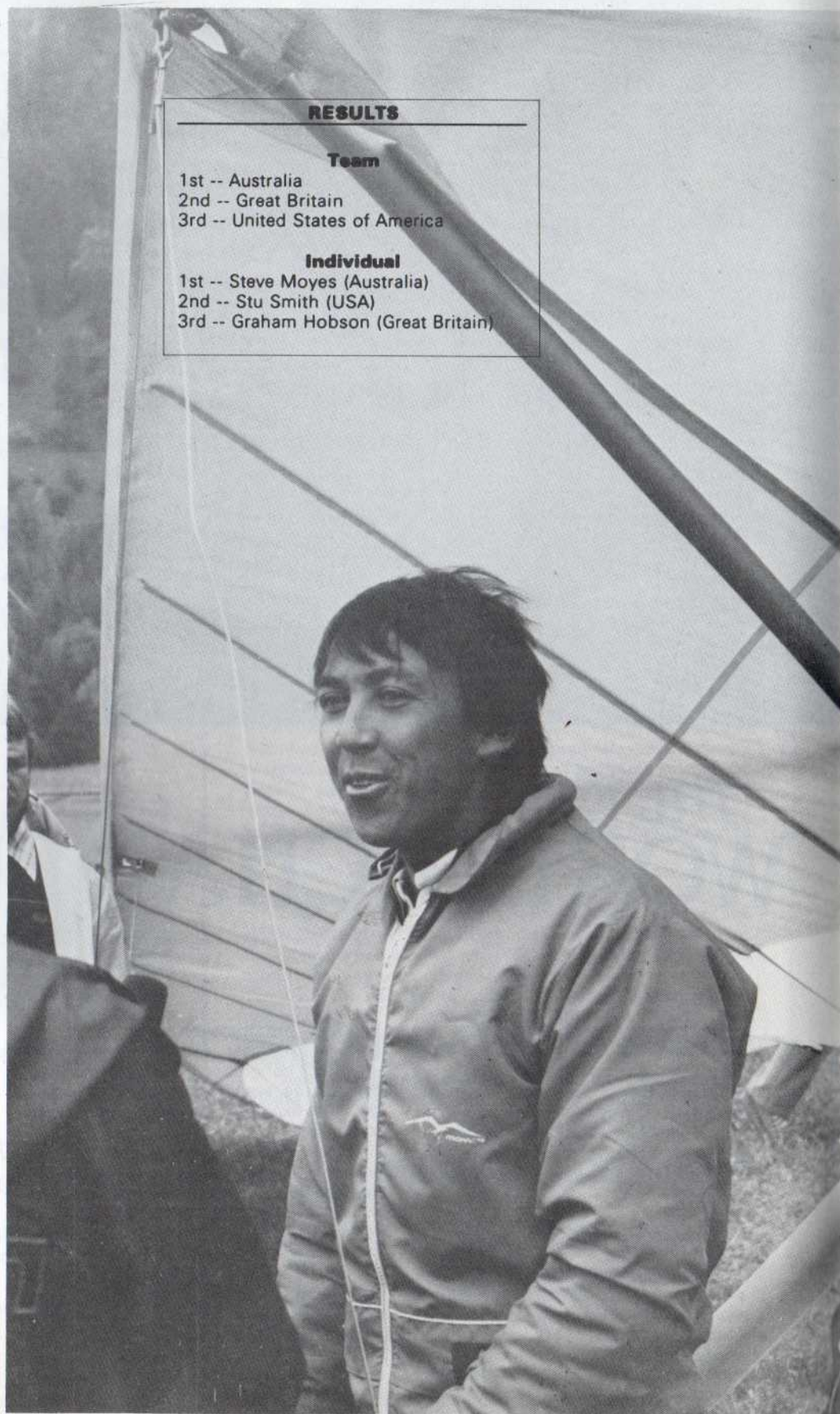
BREAKING DOWNTUBES

I was relieved to see that the alloy streamlined section uprights now used on many of the competition gliders break

almost as easily as their round counterparts. When I first saw them I thought they presented a great threat to pilots' collarbones. In practice it is the pocket which suffers — replacement cost can be as high as \$50 each.

NOTHING LESS

From pilot comments, anything less than long cross-country tasks are not really popular. Is it time for just a World Hang Glider Soaring Championships? Or is that what we have in the (Owens Valley) X-C Classic already?



This was the year. Yes folks, the good ole USA had finally gotten its act together. Through the efforts of a host of people around the country, money was rolling in and the World Team Fund had become a reality. It was due to this fund that hopes were high. For the first time in this nation's hang gliding history, we would be able to field a team from the best in the States.

The lineup was something with which to reckon. Leading off was Rich Pfeiffer, with Mark Bennett, Gene Blythe, Stu Smith, and my (Jeff Burnett's) replacement, Kevin Kernohan. The top five seeds were asked to choose the 6th member. They came up with Chris Bulger, the young but experienced Seattleite who was as much of a contender for World Champion as any of the others. All were primed from the Southern

California League at Sylmar. Ready to win!

This year we were going to show the rest of the world that the USA could be a threat in team competition. Past years had been disappointing, with the members being only those who could afford their own way. We had been tagged as a disorganized lot that could not seem to work together. Now it was different. They had the support of a whole country.

Why, these boys even looked like a team. All decked out in their western duds supplied by Wrangler, with pointed boots and ten gallon hats, they could not help but turn a head or two. Add a white striped jump suit from Wills Wing and matching harness with big USA letters, manufactured by Pfeiffer's High Energy Sports. Put it all together and it gave the

team quite a professional look.

However, our guys needed one more addition. Unplanned as it was, I was contacted early one morning with a request to coach the team. How could I turn down such an offer? I felt it was all in the line of duty. Soon, I found myself blasting across the Atlantic to rendezvous with Team Leader, Dean Tanji, in Munich.

A scant few hours later, I was admiring the rugged snow covered Bavarian Alps that rose abruptly from the valley of Fussen. Nestled between two giant peaks stood a glistening white castle. Immense enough not to be dwarfed even by these surroundings, Neuschwanstein was a site to behold. A mere one hundred years old, this work was the dream of King Ludwig II.

A short distance from the castle was

THE 1983 WELTMEISTERSCHAFTS

The "American Version" of the German World Meet/by Jeff Burnett, American Team Coach



CLASS OF 1983



Gene Blythe
Comet 2



Rich Pfeiffer
Streak



Mark Bennett
Comet 2



Stu Smith
Sensor 510



Kevin Kernohan
Comet 2



Chris Bulger
Streak

the base station of Tegelberg. A ski operation in winter with a cable car running up to a restaurant at the base of the area. From the launch ramps here, a pilot can climb out and jump over to the Austrian Alps where there is a row of peaks quite similar to the Whites in the Owens Valley.

While admiring all this scenic beauty, I was driving along the course with Dean in a brand new Citroen wagon supplied graciously by the organizers. In one small village, Dean made a distinct impression upon one German by jumping out in front of his little Fiat on a blind curve. The crunch definitely detracted from the fine lines of our fender. I am kind of glad I could not understand what the man was saying while shaking his fists.

During the practice days the pilots were quite surprised to find the weather far different from what they expected. Day after day was soarable with western style rodeo air in the afternoons. The team always flew together as a heat and diligently practiced the various routes and tasks. With knowledge gained from these flights, the team brought up suggestions for improvements in the tasks and scoring. We were soon to learn, while at the first team leader meetings, that no changes would be considered. This was a disappointment emphasized later in the contest.

So it began, first with a parade of all the teams under their respective flags, and a big brass band with traditionally garbed dancers, along with beautiful teams of horse drawn carriages marching through town toward the landing fields. The day ended under a clear sky filled up with a Pitts Special doing some spectacular maneuvers.

Of course, this was all too good to be true, and on the first competition day, the rain arrived on schedule, fortunately lasting only a day. The following morning we got down to business.

The day was unlike any condition encountered during the practice week. The declared task was a six pylon course twelve kilometers to the east of launch. A return to the main field at the foot of Tegelberg, or if the last pylon was achieved, landing at the alternate field eight kilometers out, was required to avoid a zero. With an eight man heat, it was impossible to know what all the competitors were doing. And in one instance, they could fly a different length course and yet be scored in the same bracket.

Conditions were so different that the pilots had to forget all the altitude parameters set up during the practice. These were inadequate even when flown conservatively. Rich Pfeiffer was off in the first group. He was making such good time that he decided to leave Guggenmos, the local hero. He even passed up the wind dummies who were still on the course as he blazed toward Pylon 6. Short fused, however, he landed out near the pylon. From there, he watched "Guggenmonster" pass overhead on his way back to the main field. Later to follow, Gene Blythe got the flush job and plummeted short of a zone. The wind in the valley started wailing and Mark Bennett did a downwind face plant just a few feet short of the scoring line. They were not alone though, as fifty pilots failed to get back to a landing zone that day.

So the team was off to a hard start. It would be an uphill battle for the rest of the meet against the Aussies and the Brits who had both turned in a great opening day.

The following day a different task was chosen. A longer out and return with five designated landing fields. In order to score significantly higher than his opponents, a pilot had to fly at least one field further than the group. If they all landed in the same location there could be only a twenty percent difference in scores, with the penalties on times, even though there might have been an hour or two difference

on flight times.

Because of this maximum deduction clause, it was difficult to gain ground on the leading teams. It greatly benefitted pilots to fly conservatively, and be patient. There was no real incentive to go fast.

The other X-C task called was yet a longer course, a 35 kilometer out and return. On its first trial, only one pilot was able to complete the distance. Bob Bailey of England left everyone in the dust. Stu won his heat with the next longest distance by getting halfway. He and Chris were leading our guys in points, but the 'Stralians and Limeys were still walking away. Pfeiffer was starting to cook and make headway through the ranks.

The weather decided to take a turn for the worse and a rash of cumulonimbus clouds began showing their presence. The organizers were anxious to get flights off the hill and were not going to be intimidated by a little thunder. Even with lightning striking the peak above launch a kilometer away, the launch director would be giving the "Start, Frie" command and the next pilot would jump. It was at this time that the directors got a chance to test their protest procedures and the handling of re-flights.

Before long the weather deteriorated completely. Strong winds, zero centigrade temperatures, and accumulations of four inches of snow signaled that it was time to dig in. What else was left to do but sit in the restaurant waiting for the hourly briefings and order more food.

Some were checking out the town with its old Bavarian section and abundance of small shops on the closed off cobblestone streets. Others were taking the castle tour of its impressive towers and spires while realizing where Walt Disney must have gotten his inspiration.

Meanwhile we would sit around and test the capabilities of the FM radios loaned from Bill Bennett. Bill and his family

had arrived just prior to the contest and assisted while enjoying the cultural experience with us all. Chris Bulger's parents were also on hand and provided an immense amount of help. We had two ground support crews. One with Eric Fair and his girlfriend, Maggie, and the other comprised of Dean Tanji and Joe Bulger. Both gave the pilots on launch consistent information about the course, a very necessary part of the strategy.

After several days of severe weather with no foreseen break in it, the organizers were desperate to get off the crucial sixth round needed to make the meet valid. A few times pilots were told to race out and set up while it was clear, only to break down as fast just before it hit the fan. On one occasion the break was longer than usual and a whole round was able to launch. It was very weak lift to begin with and a duration/spot landing task was called. Well, most of the groups went as expected. Stu got the closest to the bulls-eye. But as the darkness got closer the flights got wilder. By the time the last pilot had launched, big snowflakes were whizzing by launch. In the valley a gust front clipping along at better than twenty knots came blasting toward the landing field. Pilots in the air found themselves wishing their arms were a lot longer while trying to race away from the cloudsuck. It got so bad that, in one case, Dean Kupchanko of Canada not only missed the landing zone, but as somebody put it, he missed the whole country. He landed across the border in Austria. Needless to say, re-flights were in order.

Also needless to say was the fact that Moyes and the Boys kept showing their talents as they took a commanding lead. As the weather improved and more real flying was in store, we would see if they could hold off the pack. Now the Pfeiffer Blitz was on, and with the long X-C courses, the Americans were starting a comeback. One face that was always seen at the goal was Stu's. He was rarely the first one there, but he never failed. Meanwhile Hobson and Moyes were neck and neck in the lead. Both were flying impeccably.

As the flights improved, so did the attitudes. Now more traffic than ever was seen next to the landing field where there was a huge tent that contained the nightly beer blast. Outside was a tanker truck from the local brewery that was supplying the giant size mugs. One thing for sure is that the Germans know how to party. The only folks that could compare were the New Zealanders. They would go at it as if to empty that tanker. One thing that saved me was my broken arm. I could barely lift a full stein.

During the remaining cross country flights another item arose that proved to be a weak point in the rules. In the designated landing fields pilots together from the same group were scored according to who landed first. Pilots landing later in that field received penalty points. The problem was that if it was a tightly contested race, the person on top of the stack, out-thermalling his competitors, was at a disadvantage. Unless he could reach the goal or leave his



High banking it into the Tegelberg landing area.

heat a field behind, he would most likely land last in the group and eat the most penalty points.

Going into the last cut, the USA had four remaining pilots with Bulger and Bennett needing to move up in order to make the finals. The Australians had four strong positions and the British were still a full team with six members left.

The 70 kilometer out and return task was chosen, but as the sun got higher the valley winds began increasing. It soon became evident there would be no one returning from Wertach. Only two pilots failed to reach that turnpoint, and because of the 20% maximum deduction rule, the scores did not vary enough to change the standings much. That left Mark and Chris First and Second from making the cut, and blew the chances of the USA overtaking the Brits.

Because of weather delays, the closing ceremonies were to take place immediately after the final round. So the short course had to be utilized for the last sixteen man heat.

A stiff headwind toward Pylon 6 prevented the whole task from being achievable. Some of the first off opted to charge to the close pylons and return to the main field, while others that gambled on Pylon 4 came up short. The safe shot proved to be the third pylon with an easy downwind skate home.

Steve Moyes was to prove again his consistency and collect his title as World Champion. The major change in the standings was Stu Smith bumping Graham Hobson from Second to Third. Rick Duncan was Fourth, followed by Blitz Pfeiffer (5th), Bailey (6th), Mathewson (7th), Guggenmos (8th), Thevenot (9th), and Jarman (10th).

The Australians had done what they had come to do — prove they have always had the talent and it just took putting it all together. The British had to bow to the victorious contenders from Down Under, while the Americans were nipping at their heels. The colonists had made their best showing ever in a World Meet. The boys of the Great White North, the A Team from Canada pulled in a respectable Fourth.

While the last trophy mugs were being emptied, the mad rush to barter anything and everything for those prized possessions began. The cowboy boots and hats were especially hot items. The Germans had been drooling over them since Day One.

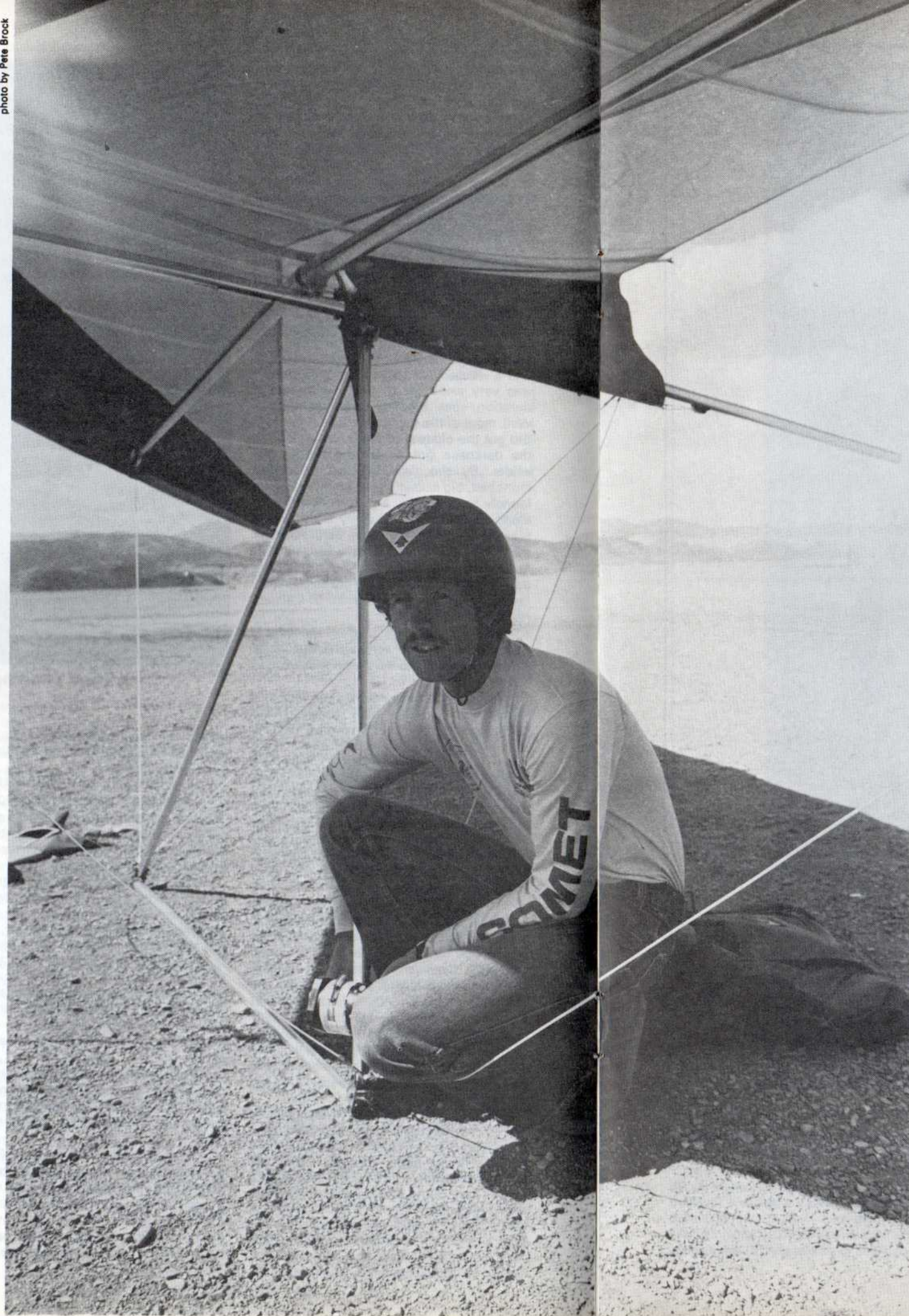
After the last "Good By's" we were bagging our new merchandise and signing a poster for the landlord's family. We could not let them forget those crazy American hang glider pilots, even the two they caught singing drunk in the sauna during the middle of the night. §

221.5 MILES

With the XC Classic over and most of the pilots drifting away, one might have thought that the summer flying season was late. Many of the world's very best cross country pilots remained in the valley waiting for the change.

All of us knew that Horseshoe Meadows Road, climbing high into the Sierra Escarpment at the southern end of Owens Valley, held the greatest promise for the flight that would break Jim Lee's unofficial yet undoubted 168 mile record of two years before. The morning sun would light the sheer, vertical faces before 6:00 AM, generating effective lift hours before either the Whites or the Inyos across the valley were soarable. If a pilot could launch early and somehow cross the valley around noon, he could reach the popular Owens Valley launches of Gunter or Paiute at a time when it had been proven possible to fly 150 miles. This meant that a 200 mile flight was just a matter of time for a pilot with the skill and stamina to fly for ten hours — and, most importantly, the diligence to be at the site when the right day came.

Hang Gliding's Greatest Day as Larry Tudor's 221.5 mile flight leads the parade of record breaking flights from Horseshoe Meadows/story, map, and photos by Rick Masters



THE DAY
It had become my custom, since Helmut Denz had made the first 100 mile flight from Horseshoe three weeks before, to meet pilots at the Pines Cafe in Independence at 6:30 AM, have breakfast and discuss the weather and flight strategy. On the morning of July 13, I was extremely pleased to find Debbi Renshaw and Rik Fritz, in addition to Larry Tudor, Lori Judy, and Klaus Kohmstedt for whom I was running retrieval.

Excitement was running high. The previous day, ten flights had been reported of over 100 miles from Horseshoe. Ed Goss and Rick Schuster had reached Mina, Nevada, 132 miles north. Klaus had set a new world record distance to a declared goal with a 123 mile flight to Mina Junction. And Jenny Ganderton, the hard-driving woman pilot who had come to the Owens Valley from England exclusively to set world records, had flown 115 miles on her Magic, a new woman's record.

We studied the weather forecast intently. For some reason, the National Weather Service had been unable to supply the *Los Angeles Times* with detailed isobaric data, but it was clear to us that a pressure distribution with ideal cross country characteristics was in existence. Lows covered the entirety of California with a high to the east and a cold front sweeping down the Pacific above Oregon. Also, the sailplane pilots who were holding their regional competition in Bishop had told us that the conditions today would be the best of the summer.

Klaus, Larry, Lori, and I arrived at the upper launch of Horseshoe Meadows Road at 9:30, after a stop in Lone Pine for fresh film and Gatorade. The wind had already begun to cycle upslope, overcoming the katabatic night winds. On Owens Lake, below Cerro Gordo, fingers of disturbance indicated the typical switch of the valley winds from north to south had already occurred. In fact, the wind seemed southeasterly, offering a hope that the usual Sierra rotor would not set up in the late morning. Without the rotor to breakup thermals and create increasingly vicious turbulence along the crest, faster flights at higher altitudes were possible, although greater difficulty would be encountered in crossing the valley if the wind increased in strength.

THE CHALLENGE
Larry had been present at launch the day before, but had not flown. He knew that what he was about to attempt would be one of the greatest efforts in a lifetime of extraordinary accomplishment. The day had to be "right." And he had to feel right, both mentally and physically. These intangible factors had not matched up on Tuesday, but today he felt good. He was confident that, weather permitting, he could navigate the 200 miles to the north. He was intensely aware that at the end of such a flight lay the spectacular \$5,000 prize offered by Ultralite Products, but even greater was the challenge of being the first. He set up his Comet 2 and followed Klaus off the mountain at 10:30.

Klaus found a thermal over the north edge of Horseshoe Canyon and thermalled up to 11,500 feet with Larry close behind. As they flew north, the lift along the Sierras kept improving.

Other pilots were readying to launch. Rik Fritz followed Lori Judy around 10:40. Top British XC pilot, John Pendry, launched his Magic, followed by Australian, Steve Blenkinsop, on a curved tip (Moyes) Probe. Judy Leden took off in her Duck in hopes of beating Jenny's distance of yesterday, but Jenny caught a wingtip on a bush at the lower launch, demolishing her leading edge and forfeiting her chance to defend her title. Steve Moyes had me sign his barograph and launched last in his sleek, curved-tip GT.

It looked like a race to me.

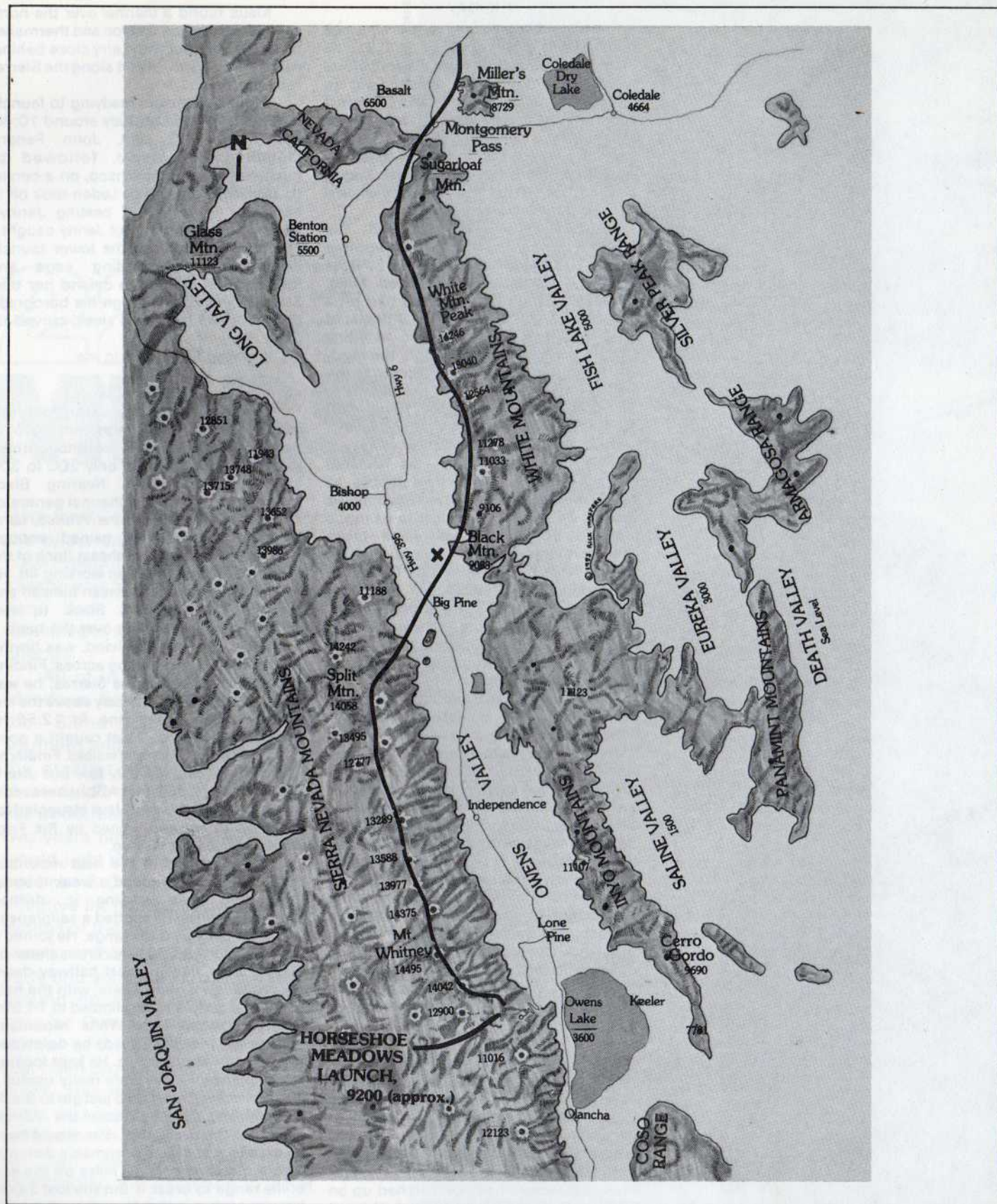
THE COURSE
South of Big Pine, Larry "got real pointy" and left the Sierras with 13,500. Holding his best glide, he encountered surprisingly light sink of only 200 to 300 fpm over the valley. Nearing Black Mountain, the powerful thermal generator at the southern end of the Whites, Larry found a thermal and gained enough altitude to reach the southeast flank of the mountain. There he began working lift. He needed lots of space between himself and the top of notorious Black to feel comfortable about going over the back.

Klaus, on the other hand, was having terrible difficulty in getting across. Finding strong sink as he left the Sierras, he was down to 6,500 feet, scarcely above the low volcano south of Big Pine. At 12:56 he called on the radio, "I just caught a good one!" I raced to Black and waited. Finally he approached, unbelievably low but utterly determined. At 500 feet AGL, where most pilots would turn away, Klaus struggled for every bit of lift and, joined by Rik Fritz, slowly worked his way up.

Larry crossed to the next mountain north of Black. He found a weak thermal there and was working it, drifting downwind, when he spotted a sailplane in better lift back into the range. He joined it and rose to 13,000 feet. From there he made Paiute Peak, almost halfway down the range, on a glide. There, with the help of another sailplane, he climbed to 14,500 feet and raced over White Mountain, gaining another 500 feet as he dolphined in the abundant thermals. He kept looking for sailplanes — they were really useful!

Lori knew if she could just get to Black, a flight into Nevada above the Whites would be relatively easy. She would have an excellent shot at the woman's distance record, needing only 20 miles off the end of the range to break it. But she lost 2,000 feet as soon as she flew away from the Sierras. If the sink continued, she would not even reach the highway, much less Black. She turned back and spent half an hour searching for the wonderful lift that had so suddenly abandoned her. At 1:50, she headed out again. The sink was still there!

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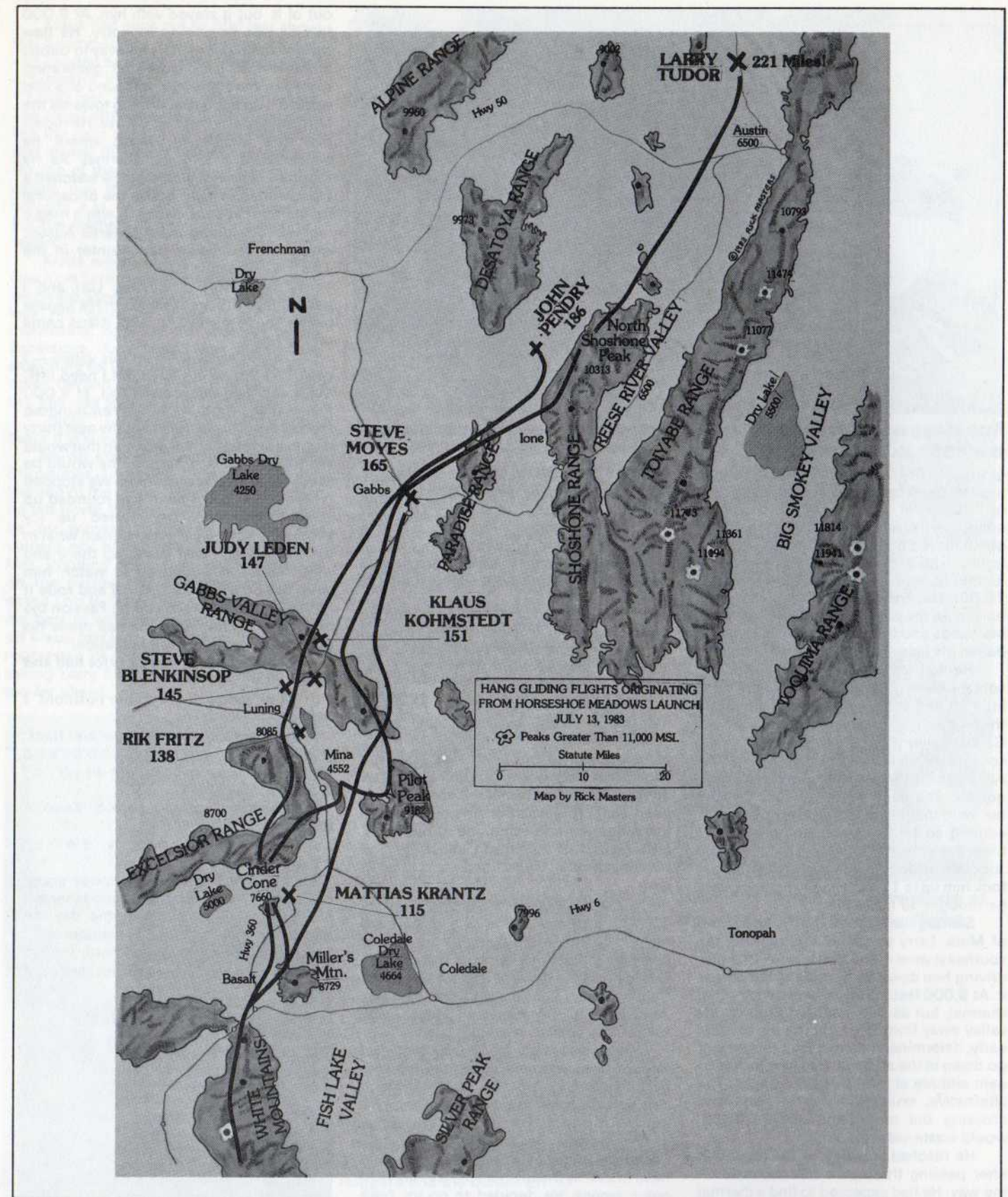
"I'm approaching Big Pine at 10,000 in big sink," she radioed.

I stood at the base of Black, searching. Finally I spotted her, low, much too low, but drifting toward Black in slow, wide circles. The wind was still southeast, but at her altitude it was hopeless to head against it, so she made for the west face of Black

where the wind was crossing. She reached it much lower than Klaus, lower than I have seen anyone make it and still try.

She brought her tiny Comet close in to the jagged black cliffs, sometimes coming within a wingspan of the rocks. I watched anxiously as she battled the turbulent cross-currents, searching out the broken

thermals that occasionally buffeted her wings. She worked the dark face for several minutes, maintaining her altitude but never gaining. Then, suddenly, she hit a fickle gust of down air and it was over. She fled the mountain and landed, overwhelmed with the heartbreaking frustration of have come so close — so close! And Judy Leden,



high, raced overhead . . .

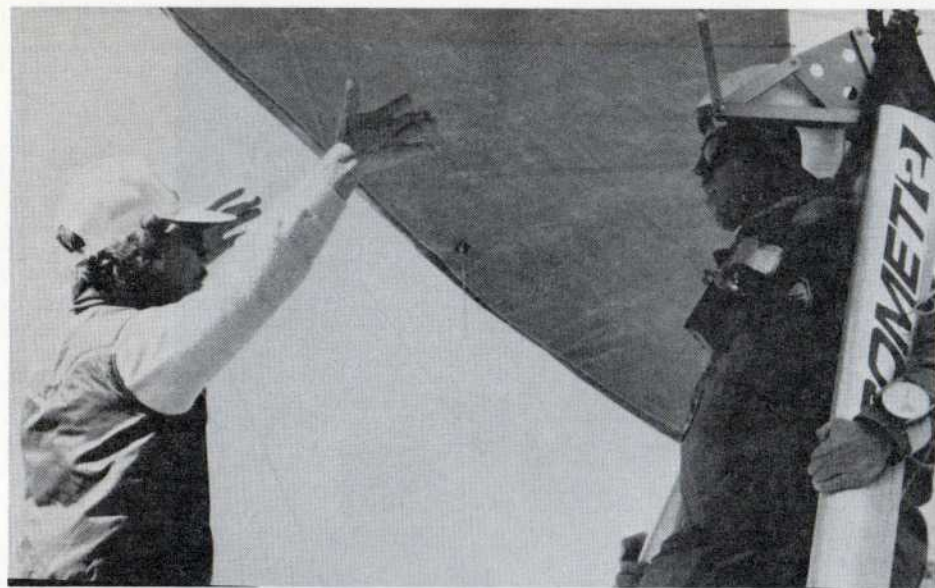
Larry was down to 11,000 feet as he came to the great plateau of the White Mountains, Pellisier Flats. He found a thermal and began circling. At first, it was weak, but after a few minutes it began lifting him at 1200 fpm and he rode it high above the Flats. North of him, he saw

convection cumulus forming above Boundary, last peak on the White Mountains and the highest point in Nevada. He flew in a straight line for the peak, hitting lift all the way.

Klaus reached the southern end of the Pellisiers with 15,000 feet, aware that Larry was constantly pulling away from

him. John Pendry was racing towards Paiute. Steve Moyes, late, was climbing Black and moving fast. Lori and I loaded her Comet onto the car and sped back to the highway, desperate to catch up with Larry and Klaus, 40 miles ahead.

Larry rose above Boundary on a 600 fpm thermal, then left it heading north to a



Roy Haggard, Designer of the Comet, assists Larry Tudor during the 1983 XC Classic.

group of flat-bottomed cumulus. He had expected sink on the way but he kept going up. North of Boundary, he began to encounter severe turbulence. He forgot about his radio and gripped the control bar tightly. Upward he climbed, higher and higher. Above Montgomery Pass, he was at 18,000 feet and the cold was numbing his hands. As the turbulence eased, he pulled his hands and fingers from his gloves and balled his fists, concerned about frostbite.

He left cloudbase on a course to solitary Miller's Mountain. There he found little lift and continued toward Pilot Peak, the highest point at the southern end of the Gabbs Valley Range, while crossing the southeastern edge of the Excelsior Range. Above the Excelsiors, he began to drop quickly. The depressing thought crossed his mind that he might now be drilled after coming so far in such a short period of time. But when he reached the flats at Mina Junction, he found a powerful thermal that took him up to 12,000 feet — high enough, he thought, to make Pilot.

Skirting the edge of the dry lake south of Mina, Larry suddenly realized that the southeast wind was increasing in strength, driving him down as he tried to cut across it. At 9,000 feet, he began working another thermal, but as he rose he drifted up the valley away from Pilot. He left the thermal early, determined to make Pilot this time or go down in the attempt. He knew he had to gain altitude at Pilot to go for Gabbs. The alternative, cruising north to Mina and crossing the mountains above Luning, would waste valuable time.

He reached the side of the mountain after passing through a few thermals on the way. He had expected to find a thermal on the eastern flank. He caught one and took it up the side. As soon as it rose above the top, it turned to 1500 fpm and he rode it to 17,000 feet. As he headed north on the Gabbs Valley Range, he looked back and saw a cloud forming above Pilot Peak.

At 4:00, with Larry over Pilot, Klaus crossed over Basalt on his way to the Cinder Cone on the edge of the Excelsiors.

From the ground, Lori and I reported a light northwest wind. Between Boundary and Montgomery Pass, Klaus lost 7,000 feet and we had watched him lose precious time working himself back up to 12,000 over Sugarloaf, near the Pass. Now he was gliding north without the slightest hint of lift.

"This is heartbreaking!" he radioed down, expecting to land. But he reached the Cinder Cone with a few hundred feet and found a weak thermal. "I've got some lift!"

Larry, meanwhile, running north on the Gabbs Valley Range, spotted some sailplanes in a thermal and joined them, climbing up to 17,000 feet. On the sagebrush flats north of Luning, he saw dust devils drifting out of the north and his heart sank. This was the time of day when the wind frequently changed its direction, blowing out of the north and killing all record attempts. He radioed Klaus to warn him.

Steve Moyes, approaching Pilot at 13,000, also saw signs of a north wind beyond Luning. More than an hour behind Larry, he radioed his retrieval crew that he would cross the dry lake and cut across the Gabbs Valley Range northwest of Pilot. John Pendry, just ahead of Moyes, was following a similar strategy.

Klaus was also at 13,000 feet, but west of Mina Junction above the foothills of the Excelsiors. He now faced a difficult decision. He knew that his best chance for an open distance flight lay in the direction of Pilot across the dry lake. But he had declared Luning as a goal, and he would have to overfly the town on the way north to get a record. He decided to go for *both* records.

"Wish me luck," he radioed down. "There is always a first time for everthing." It was 5:00.

Larry left the range with nearly 18,000 feet. He felt that he could pass to the east of Gabbs and be very close to beating Jim Lee's distance record. But as he flew north, he encountered strong sink. He tried to fly

out of it, but it stayed with him. At 9,000 feet he was beginning to worry. He flew toward some pointy hills halfway to Gabbs in hope that they would be generating thermals. Sure enough, he found one and worked it up but it was drifting towards the northwest, away from his course. He rode it over the middle of Gabbs where he encountered a stronger thermal. As he took it as high as it would go, he watched a cloud street forming above the Shoshone Range northeast of Gabbs. It was a magic highway stretching away towards Austin, where he had flown from Gunter in the 1981 XC Classic.

A mile short of Luning, Lori and I passed Rik Fritz breaking down his Sensor beside the highway. At 5:30, Klaus came on the radio.

"I'm getting down over this valley — I can't find lift! Rick, I need lift! I need lift!" Klaus was two miles away and, at 9,000 feet over the foothills, only a few hundred feet off the ground. He spent the next thirty minutes scratching for anything that would keep him aloft. At this point he would be satisfied just to reach Luning. We stopped on the west side of town and rounded up some witnesses. They served us icy lemonade while we tried to explain what in the world Klaus was doing up there and why they were supposed to watch him land. But he caught a thermal and rode it right over town toward Luning Pass on the other side of the valley. He had made his goal. What fantastic determination!

I had not heard from Larry for half an hour.

"Larry Tudor, give me your position!" I radioed.

His voice came back, slow and thick. "I am at eighteen thousand feet—five miles north of Gabbs..."

"Lori says you're hypoxic. Keep it together."

"I am without a doubt hypoxic right now..."

Larry reached the Shoshones about 6:30 and immediately found good thermal lift. Because it was late in the day, he decided to stay high and use whatever lift he came across. He headed north toward the end of the range, hypoxic but keeping it together.



England's John Pendry and his Planter's Peanut glider.

Klaus had sunk out to 800 feet above the Luning-Gabbs road, turned around, and headed back to Luning when he found a powerful thermal that took him up to 12,000 feet. He headed across the pass. The cloud street beyond Gabbs beamed like the Holy Grail. If he could just get to that street! But his luck was running out. On top of the pass he began sinking. We called out the wind direction and he brought it in, 151 miles from Horseshoe. For the moment, it was an official world's record.

Klaus waved us on. We were a long way from Larry. As we raced toward Gabbs, we heard Steve Moyes on the radio say he was not going to make it out of the mountains. Back on the foothills of the Excelsiors, Judy Leden was desperately searching for lift. She had already flown 20 miles beyond Jenny's mark of yesterday, but she was shooting for Luning Pass.

"Rick!" Larry called. "You'd better hurry if you want to film this."

As we entered the south end of the Shoshones, Larry was 25 miles north on the end of the range. If he got drilled when he left North Shoshone Peak, there would be no witnesses. And he had neither camera nor barograph. We had to catch him. Winding down from the Shoshones on the narrow dirt road beyond lone, I asked Lori to fasten her seatbelt, then did my best to wind the speedometer needle off Klaus' rental car. Behind us, we raised a roostertail of dust 100 feet high. I kept asking Larry if he could see it, but he was too far ahead.



- Who They Are
And How Far They Went**
- MATTIAS KRANTZ — 115 Miles**
RIK FRITZ — 138 Miles
STEVE BLENKINSOP — 145 Miles
JUDY LEDEN — 147 Miles
KLAUS KOHMSTEDT — 151 Miles
STEVE MOYES — 165 Miles
JOHN PENDRY — 186 Miles
LARRY TUDOR — 221 Miles

Steve Moyes made it to Gabbs, a flight of 165 miles. John Pendry flew even further, landing on the west side of the Shoshones, miles from any road with 186 miles between himself and Horseshoe Meadows. Larry Tudor, on the other hand, was not done yet.

"It's really pretty up here," he radioed at 8:00. "The sun is setting..."

At the end of the Shoshones, Larry turned north up the Reese River Valley. With the cloud street dissipating and the thermal activity dying off with the setting sun, he figured that this would be his final glide. But as he passed Austin, tucked back into the Toiyabe Range to the east, he encountered an evening lapse-off or convergence of some kind. Without turning, he had the control bar halfway in and was not losing altitude!

"Rick, please hurry! It's getting dark!" "What's your altitude?" I asked. Lori and I were hanging out the windows trying to find him.

"11,500," Larry answered. "I've been going up for the past 15 minutes. I just want to hug Lori and go to sleep."

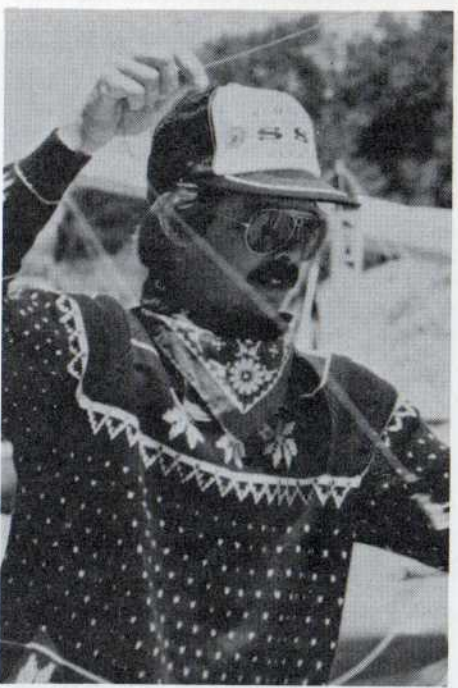
We turned north on the highway to Battle Mountain, knowing he must be just a few miles ahead. At 8:20 we spotted him directly above. I stopped and jumped out to flag down the only truck we had seen on the road. The driver, Pat Alles, must have thought I was some kind of nut until he saw Larry descending, then he was eager to witness the landing.

Larry touched down at 8:29. He had been in the air for nine hours and fifty minutes and flown 221.5 miles from the world's foremost cross country site, Horseshoe Meadows. His body ached where his harness had pulled tight. But his arms were not even tired. Kudos to Roy Haggard and the Comet 2!

We celebrated the most spectacular day in the history of hang gliding at a burger bar in Austin, Nevada.

Larry bought.
He's got the bucks. §

Steve Moyes, the new World Champion, flew 165 miles, into Nevada.



Rik Fritz threw his parachute at the end of his 138 mile flight.

Rick Masters is a freelance cinematographer, and journalist. He was awarded the 1982 U. S. Gray Prize for the best media representation of hang gliding for his film "Aoli, Comet Clones & Pod People."

The Tudor flight and activities of this superb day are being added to his newest movie, the two-hour-long "Sky Blue Movie."

AERO TOWING

Our continuing program of supporting towing development now takes us to Aero Towing. First flights are successful, but not without problems/Experiences by Tom Phillips, Cliff Whitney, and Tug Pilot, Leon Riche — Photos by Cliff Whitney and Dan Johnson



Following are notes and thoughts on aero towing based on three outings. Each time we learned some things, had some surprises, and usually solved some problems, only to come away with more problems and questions to address.

Successful is a good word to describe our efforts so far. We have not hurt anyone and we have learned a lot. Because of some experiences described later, we will add a weak link to our system finally. We want to continue our safe record by not relying on the infallibility of our releases in the future to get us out of trouble.

by Tom Phillips

CONDITIONS: Extreme haze; visibility less than two miles; temperature in upper 90's; wind less than 5 MPH from the north-northeast.

July 6th, 1983 — The tug fuel line problems cause delay in leaving Crystal. Numerous test flights and replacements of fuel line allowed us to correct the problem and leave around noon. Tug pilot, Leon Riche, flew the tug plane. I followed by auto after calling other interested pilots or observers. We met at a cow pasture near Dunlap, Tennessee, with Brian Burnside, Cliff Whitney, and Tim Morely present. Setting up a Duck 160 rigged with a skyting bridle (single point release) of my own design, we then laid out 200 feet of polypropylene ski rope with rings on each end. We tested the releases, and found them stiff but workable. The ground was too rough to roll off, so I elected to run off.

Our first attempt was a smooth take-off but suddenly the engine lost power and I rolled in on wheels. A second attempt got off satisfactorily with a good climb, but the glider was oscillating badly. My cocoon boot got folded up so I could not get prone. Either turbulence or wake turned me so far that I released at about 150 feet and landed down wind. On the third try, I let the boot hang over the base tube. Following a good launch, I got prone right away, but fought with a lot of yaw/roll input to stay pointed at the tug. It was nothing scary yet, it just required a lot of input to counter the effect. I released at 300 feet during the first turn because I was pushed out of the turn and could not get it back quickly enough to suit me. By the fourth try I managed to stay in a high tow position long enough to complete a first 360° turn. At about 500 feet the engine again lost power and I released. The sticky prototype "3 ring" release did not let go easily and I had to push out to get it to let go.

The engine problem turned out to be trash in the fuel line. When it was cleared up, we were getting 300 feet per minute of climb.

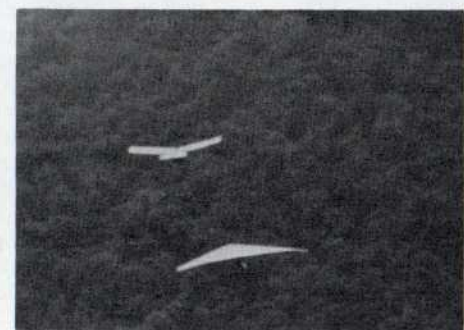
Cliff Whitney wanted a try, so we rigged his harness and he got off with a good launch, but had an unintentional release at about 200 feet caused by a short release line. His second try looked good; he made about two circuits of the field and

was off tow at about 1000 feet. On the ground he said that he had released the three ring release during his first turn but as he did, the glider came out of the yaw and back in line *without the release opening*, so he made the rest of the tow until the release finally let go in a hard correction. Brian had a couple of tries in Cliff's harness without too much success as he had not flown the Duck or that style harness before.

My next try was a wild ride because we moved the upper bridle attachment forward to try to cure the wandering yaw problem. This only kept me from getting the nose up as high as in necessary on take-off. Unknowingly compounding the problem, Leon deliberately tried to climb steeply which kept me in the wake turbulence until another unintended release occurred because of a too short release line. [Note: The release line was kept short to assure the pilot would not have an excessive pull length to detach himself. Finding the optimal length took more than this first day.]

My last tow of the day was the best. By then, the small bumpy thermals had died (if they were ever truly there at all) and Leon and I put it together with our air speed. I was able to climb to high tow and stay there by keeping the bar pulled in a little. By the time we got to 500 feet it was easy. I could move out to either side to steer the tug and was relaxed for the first time. I could have climbed till we ran out of fuel, but at 2,000 feet the view was terrible because of the haze, so I released and headed back to earth.

Problems included release malfunction and engine failure as well as minor ones like Brian's failure to hook in and my harness boot.



AERO TOW LOG — DAY 2

In spite of new releases and a new location, our next try was less impressive. We changed the location to a long narrow field which was in a valley between some low foot hills. The hills were only 200 or 300 feet high and ordinarily would have posed no problem. However, the conditions of that day were to make them seem like a confining wall. The temperature was over 100° and the humidity gave us a density altitude of 7,500 feet! Our 30 horsepower Cuyuna engine did not like that, especially as it was tuned for our 600 foot ASL valley floor. Take-offs were fine, just like before, except

my wheels touched once and Neal Harris also experienced the same sink-out. I had several flights that day in which our climb rate took us up so slowly that it felt like we were barely clearing the tree lines between fields, and I thought we would never clear the hills high enough to enable us to turn around. We finally quit that day because of the poor performance of the tug. I did get one tow to 800 feet and released in a thermal. I climbed up to 1,000 feet and then left it to let some one else fly the tow glider.

CONCLUSIONS

It works! I am confident that any pilot of advanced skill can successfully be towed behind an ultralight. I believe that given good reliable releases, the danger to both glider pilot and tug pilot is minimal. The tug pilot should be highly competent. Our experience is too limited yet to attempt instruction in tug technique. However, Leon points out that if the glider pilots feels okay, then the tug pilot is okay; but do not shy about releasing either end if it feels wrong.

AERO TOW LOG — DAY 3

Tug airplane release system was finalized in design after trying alternate methods.

We prepared for towing at Crystal, a field of about 1,000 feet of diagonal length pointing directly into the wind. This day looked perfect. Winds were zero to five MPH, straight into our field, with only light thermal activity present. We decided that Crystal's field was large enough based on our previous outings.

Cliff went first in his 180 Duck. His first attempt was made brief by a too-short release line. But his second and third flights were both to over 1,000 feet with no apparent problems to those of us on the ground.

My two flights were less spectacular. I chose a 160 Streak for its light pitch pressure and good towing reputation. My first flight ended at about 700 feet because we were flying in a constant left turn to stay in our relatively small valley. I became fatigued because I was trying to hold my position on the outside of the turn (required procedure, says tug pilot, Leon Riche). Our climb rate again was poor, causing us to turn a lot while we were low.

On flight number two, I stopped running too soon and let my wheels touch the ground before I again was flying. We flew for about three-quarters of a mile before we had to make a turn. The glider suddenly rolled to the right so quickly that I had to release. I landed out, too low to make it back.

CONCLUSIONS

We have more questions than answers. We definitely need more power; a tug should have at least 50 horsepower it seems. But what kind of wing is required? Without trying it yet, we still are debating whether to use our double surfaced FlightStar.

Also, what about lockouts? I have now had two incidents where I was rolled so quickly that I could not recover without releasing. When released I was left in a steep wingover. Cliff had this happen to him once also, on his third flight.

It seems that with this bridle, you can get very far off track of the rope in yaw without much problem. But, you can get rolled around the axis created by the rope's line, and the center of mass principle does not help, even when the rope is pulling from straight ahead. When that happens, due to turbulence from the tug or thermals, your options are to release or [speculating] do a barrel roll around the rope. When your direction of travel is dictated by a tug plane, it is necessary to keep wings level

relative to the tug, and stay high, out of the wake.

Getting rolled by a thermal while cruising down a ridge, or across a valley, is no great challenge, but it usually requires a deviation in course before a recovery can be accomplished. You do not have that option on tow.

More power may help us stay high on tow and an improved technique on our pilot's part I hope will eliminate any more wingovers.

The experts will probably argue as to whether Cliff and I actually experienced a "lockout." I do not really think that it was, but it is a problem causing the pilot to get off tow because you can not control the roll of the glider [by weight shift alone]. We

certainly need more discussion and ideas to solve the dilemma if we are to tow in thermally conditions.

POSTSCRIPT

While local pilot experiences — some 27 flights to date — are somewhat inconclusive, it is still part of the learning process. Other parties doing aero towing of flex wings are urged to contribute their thoughts and experiences. Manufacturer support of this development could also be most valuable, especially as regards the inadequate roll authority difficulty.

In successive issues of *Whole Air*, we will continue to delve deeply into aero towing, as we feel it holds such promise for our sport. All input is welcomed!

—The Editors

ANOTHER PILOT'S PERSPECTIVE

by Cliff Whitney



First, let me start by saying that I have very little tow time — about ten flights with a boat, four with a car, and just a couple with a bungee. I do have a student pilot's license/sailplane rating along with close to 400 hours in my hang glider and 25 hours in ultralights.

When we started with the skytug system, nobody around here had a lot of experience. Tom Phillips had towed in California and made up the "three ring circus" release system, in which I now have the utmost confidence.

The first of our flights was near the Tennessee Tree Topper's Hensen Gap site, approximately 700 feet ASL. The field was approximately 1500 feet long, temperature was 90° plus, and on one occasion the density altitude was as high as 7,000 feet. We used Crystal Air Sports' two-place MX with the rope hooked on to the tail skid along via another three-ring release. Since then, we have towed from the main wing with a V-bridle, but our expert tow pilot, Leon Riche, seems to like the skid position better. We only had one harness bridle made up, so we all used a stock 160 Duck.

As I hooked in and did a harness check, I kept wondering what it would feel like to have an ultralight jerk me off the ground with a 200 foot rope. The rope was hooked to the harness through a two-to-one reduction looped up to the keel. I gave the OK signal, let the slack take up tight, and ran like hell for twelve and a half steps (I counted it later on the video), pushed out, and I was off.

I was amazed that there was no yank or hard pull like that from a ground towed "pop start." The tow plane stays on the ground for about four to six more seconds so you must pull in so as not to climb out over the tow plane and pull his nose down into the ground. Tug pilots get upset if that happens; and I have seen it happen in sailplanes. As we climb out between 200 and 400 FPM at 33 MPH, there is little line tension — about 45 to 55 pounds (How about that?). On one flight I have reached out and pulled the rope towards me. And, as you tow people know, line tension is the key to this towing

safety stuff. Stay in-line slightly above at the top of the tug's rudder; you will have plenty of control. Thermals are easy to spot because the tow plane hits them first. Roll control is pretty easy but try to stay within 45° to the tow plane's heading. If you go below the wake — it is not too bad, but you know it is there — either push out and climb, or turn and "box the wake" [avoiding the wake by deviating to the outside of the wake's path until above it]. If the tow plane sinks or you climb, pull in and help out the tow pilot. Sniff around for a good thermal, release and have a good one!

Now by *NO* means does this mean it is time for everybody to run out and hook a rope to your neighbor's ultralight. There are many questions to be answered and even more to be asked. We learn new things every time we go out. Up to two days ago I would have sworn that the system was un-lockout-able. It did finally lock out [in a rolling movement] on the last outing. I got spit out of a thermal to the left as the tow plane turned right. The rope was 60° out of line. I hung on as usual, but the glider was already in a 45-50° left turn. After about 15 seconds, tension built up so I popped off tow and thermalled for a while.

The glider does seem to yaw a bit, some more than others. The keel is now 18 inches in front of the CG. When it is farther forward it does not seem to yaw as badly, but it is very hard to take off because you cannot push out enough. So far I have not had to use my wheels (knock on wood). We are still trying different versions of the bridle. Maybe if the tow rope were moved forward I would not have locked out . . . maybe if it was not there at all . . . (more questions).

So far, I have nine aero tow flights, and I am looking forward to doing as much towing as possible. I think this has been one problem with the growth of free flight — the ability to fly almost anywhere, almost anytime. Some of the best thermal flying is over flat land. Let's go get it!

What about aero towing competition? Stay tuned for more news.

TUG PILOT'S POINT OF VIEW

by Leon Riche

Towing hang gliders in the air-to-air or aero towing method is very similar to towing sailplane gliders. Any glider tug pilot who is also an experienced ultralight pilot, should have very little difficulty in towing hang gliders.

TUG PILOT'S CHECKLIST

1— Use longer ground rolls for take-off, if possible. This is easier on the glider pilot, and assures the tug is not lifted prematurely early.

2— In the Quicksilver MX-II (others may be quite different), maintain 33 to 38 MPH, preferably 35 MPH, indicated airspeed. If the tug flies more slowly than this, it will cause the glider to settle on tow, such that it will get caught in the wake turbulence and [roll] lock out, forcing an early release.

3— Be sure your take-off is "clean," meaning that you and the glider pilot get off without problems. If the glider pilot is having trouble, he may very likely be unable to release, and if so, *it becomes the tug pilot's responsibility to release him!*

4— It is strongly recommended that your use a weak link (see main Phillips article "Conclusions.") This will assure the glider pilot can get free, should his release fail, or should he be unable to release.

5— Be aware of low altitude releases. Once the glider is off the line,

a low release could place the tug pilot in jeopardy should the tow line snag in a tree or on a fence line. The glider pilot may also be in jeopardy for similar snag reasons, such that it becomes prudent for *both* tug and glider pilot to release if one is required from a low altitude.

6— In small take-off areas, the tug pilot should release the line *prior* to landing, to prevent it from hanging up on any approach obstacles.

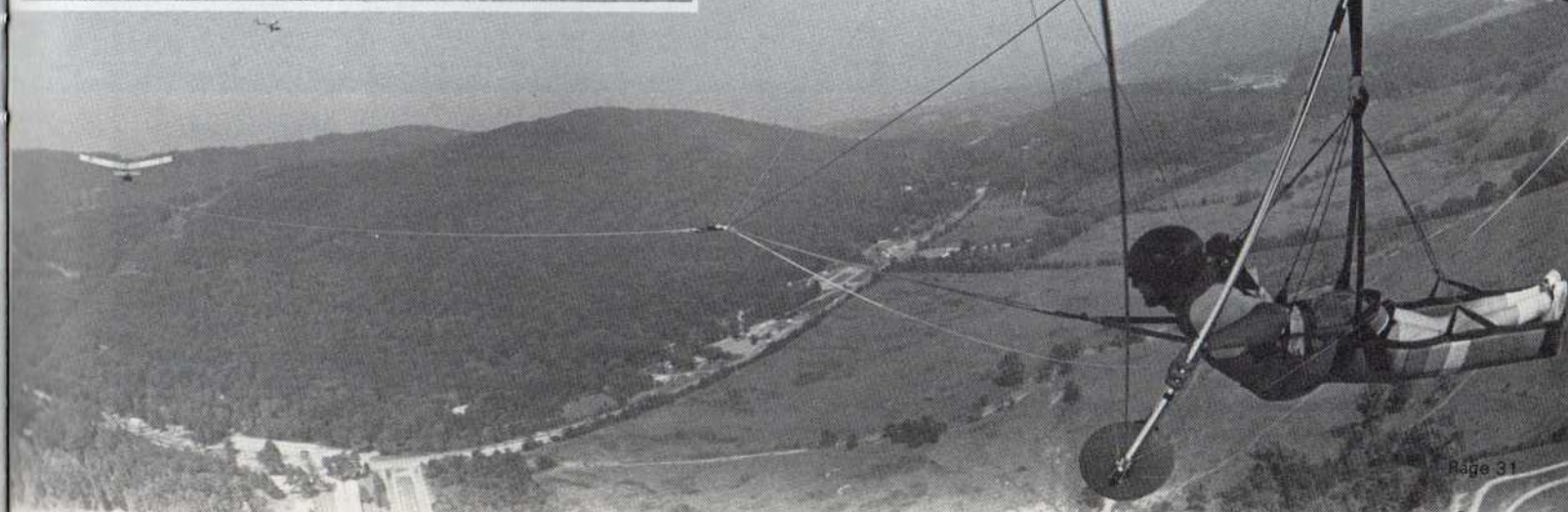
7— The tug pilot must always be aware of the towed glider's position and flight environment while under tow. Maintain visual contact directly or through mirrors (marginally effective), and by the "feel" of the glider on the tow line.

8— It is mandatory to be very current and proficient in the particular ultralight planned for tug usage.

9— Establish *fully understood* signals *prior* to beginning.

10— Our experience shows that (again on the Quicksilver MX-II) towing from the tail is by far superior to an arrangement where the tow line is attached to the wing's trailing edge.

The yawing of the glider back and forth, and pitch oscillations up and down seem to have little or absolutely no effect on the tug plane. However, in the event of a lockout, or other control loss, the tug pilot must be completely prepared to release the glider should that pilot fail to do so, or be unable to do so.



LARIANO TRIANGLE

The Fourth Lariano Triangle Cross Country contest was plagued by poor weather, just like the Owens XC Classic, yet France's Thevenot won again, albeit in a tie with fellow Frenchman, de Glanville/by Tiberio Roda of Delta Club Como



As usual, carefully organized by the Hang Gliding Club Como, the classic free hang gliding contest has taken place this year too, after successful past editions, during which flight distances on European and world class levels have been achieved.

This is why famous hang glider pilots, such as Gerard Thevenot — who carried off the prize in 1982 — Mike de Glanville; Pepe Lopez, former World Champion; world champ, Wolfgang Hartl; and many others, reknown among the hang glider fans, have

met here, all attracted by 1982 average flights of 100 kilometers!

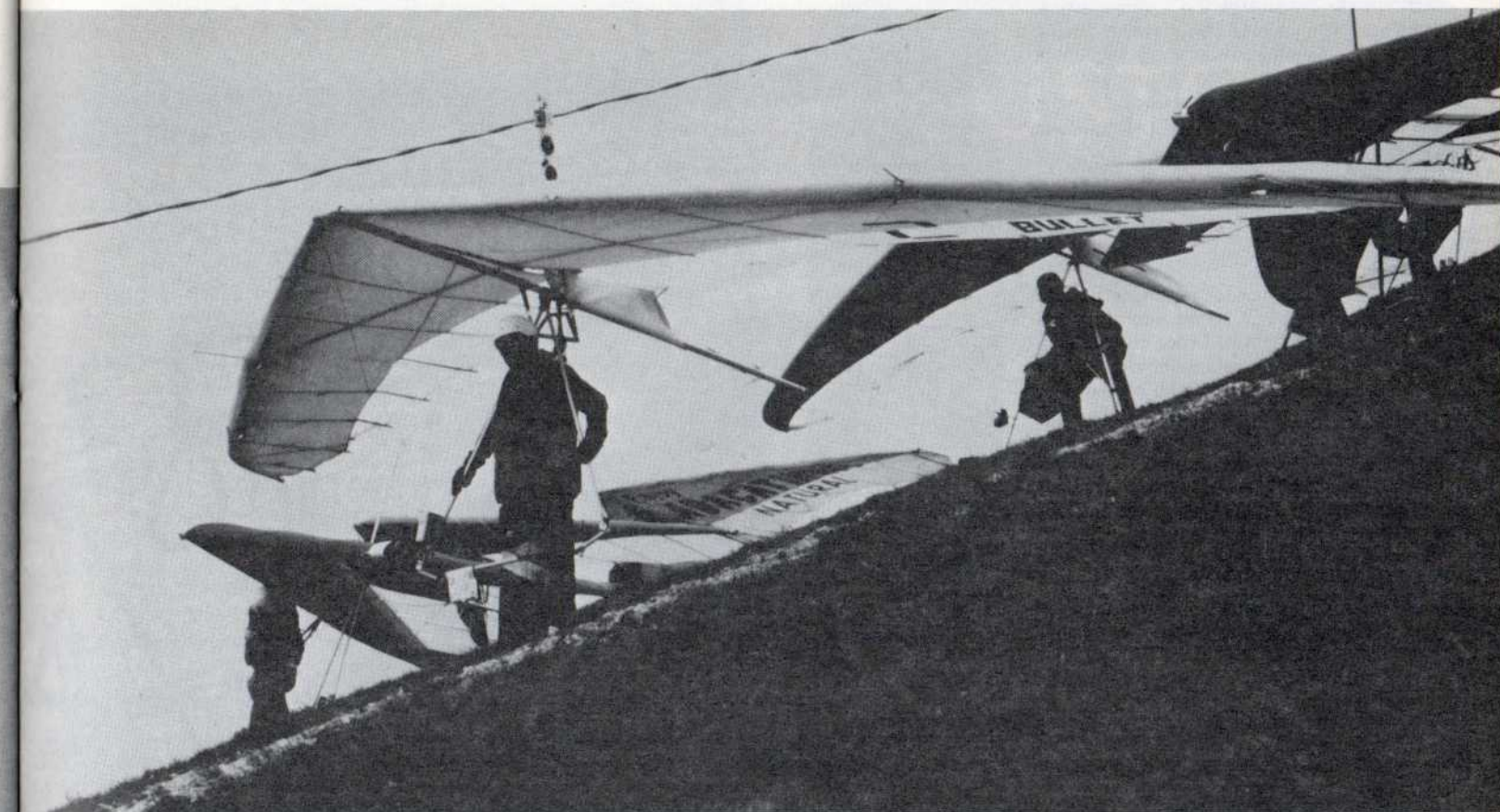
Unfortunately, weather conditions have not helped our champs. In the north of Italy, it had been raining and freezing for more than 45 days, and during the first three days, they have covered flight distances of less than 20 kilometers. This is the minimum distance for a valid competition.

Nevertheless, sensations have enlivened the competitions. Hans

Olschewsky's Explorer was stolen on the second day. But fortunately, the glider was found again not far from the landing place, hidden in the bushes, without the sticks (ribs) and the indispensable appendices (tip rudder controls - ?) to turning.

Thanks to the excellent organization of the Hang Gliding Club Como, new appendices and sticks were soon provided and Hans was able to fly on the following day.

Only on May 25th, was it possible to

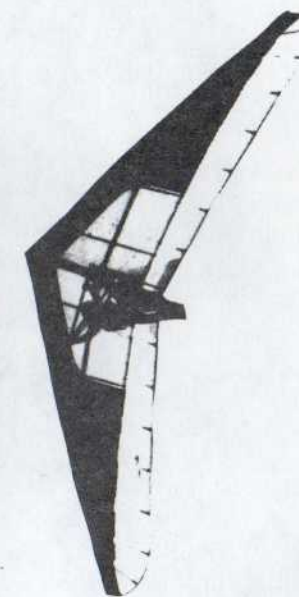


Mike de Glanville, who tied Gerard Thevenot for First, prepares to launch his Bullet.

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DEALER INQUIRIES INVITED

homologate (validate) the competitions, thanks to Mike de Glanville's and Bruno Hartmann's 21 kilometer long flights. It was the best they could do under such extremely light weather conditions. Thevenot only managed 18½ kilometers; Bob Harrison got 20½; and Denz flew to 18 kilometers.

In the evening "Daddy" Bill Moyes paid us a visit and told us that owing to nasty weather conditions, pilots were unable to fly in Kossen either.

On May 26th, it was drizzling when our friends got up in their comfortable bedrooms at the Hotel Croce di Malta in Canzo. Nevertheless, they decided to get up Mount Bisbino and to take off from its top, ready to wait for better weather conditions. Thinking of the friends in Kossen was their sole comfort; a sorrow shared is a sorrow halved! With no launch attempts made, they decided to give up; their kites needing no showers. So, back to the hotel by car all went.

On May 27th, things seemed to get better. The take offs followed each other without a break and most of the pilots flew in the direction of Valtellina. The first serious telephone call came in, at last! Gerard Thevenot called from Ponte di Legno, in the Camonica Valley. He was 93½ kilometers away!

Not far from him are de Glanville, the Brazilian, Nobre, and Pepe Lopez. Blood will tell!

Hartl was at Isolaccia, a small village not far from Bormio, on the road to Livigno. He had flown 87 kilometers. Reinard Scholl from Germany did not call earlier than 9:30 PM. He was in Valfurva between Bormio and S. Caterina. He had covered 95 kilometers and spent two hours trying unsuccessfully to fly over the ridge that is the border between Lombardy and Alto Adige. The pick up operations were hampered by landslides and blocks on the roads, caused by bad weather, but thanks to everyone's help, all went very well. Just after midnight, all pilots were at the hotel.

On May 28th, the first competition day, it started raining again, but at least there was a lot of conversation to exchange on the way to the take off. The pilots were all glad. In a week's time, they had become friends and now they helped each other and exchanged their impressions, so not even the unceasing rain could pull down the morale of the group. Unfortunately, it rained all day long and the trial had to be suspended. Nevertheless, the calculation of the covered flight distances revealed that Gerard Thevenot and Mike de Glanville were both leaders, thanks to a flight total of 112 kilometers each. They will have to share the success. Third — although his was the second best flight — was the nice Reinard Scholl, with a total of 110 kilometers.

On Sunday the 29th, the awarding of the prizes and a pleasant collective flight from the Cornizzolo launch took place. Finally the meet ended with the ritual promises to meet again for the Fifth Lariano Triangle.



FINAL RESULTS

4th Lariano Triangle Cross Country Competition

1	G. Thevenot	112km	<i>Profile</i>
	M. de Glanville	112km	<i>Bullet</i>
3	R. Scholl	110.5km	<i>Magic</i>
4	G. Nobre	105km	<i>Sensor</i>
5	B. Hartmann	104.5km	<i>Comet</i>
6	P. Lopez	99km	<i>Profile</i>
7	W. Schonauer	93km	<i>Saphir</i>
8	M. Burge	92km	<i>Comet 185</i>
9	W. Hartl	91.5km	<i>Flash</i>
	P. Waterworth	91.5	<i>Explorer</i>

Fourth Lariano Triangle Flashes

★ The weather forecast service was provided by the computer of the Alzate Airport (Co), thanks to the kind offices of the President of the Gliding Air Club of Milano, Riccardo Briigliadori. All data were sent daily to the director of the competition, Mr. Peter Skaarup, who communicated them to the competitors before their take off.

★ The only representative of the fair sex was Maria Almeida — "Keka" for all friends. She was fifth on the Brazilian team list, but ranked a First on the Triangolo Lariano's "Enjoyable" list.

★ Among those present was also Rene Coulon, Director of *Vol Libre*, (French hang gliding/ultralighting magazine), who communicated that the Hang Gliding French Federation had chosen the pilots for the Tegelberg meet, for the Lariano Triangle, and for the Owens Valley competitions. They used a selection called "Arcic." Delta Club Como notices with pleasure that a competition organized by an Italian hang gliding club is considered as a classical one to which they send excellent pilots.

★ Mike de Glanville — post accident — considers himself more man than pilot and says that he prefers the free cross country to the victory at any cost in a competition. In this spirit he took part in the contest, he was enthusiastic about the landscape, and . . . even won.

★ Gerard Thevenot — Director of La Mouette Gliders — with the new "Profils," predicted (incorrectly, as time now tells us) that at the World Meet, ". . . there will certainly be five of them in the first five places."

★ The pilots very much liked the Mount Bisbino and Mount Muggio launch sites. On Sunday the 29th, Thevenot and company took off from the Bisbino top. And Denz, with Christine, launched from Muggio, trying to reach Germany by flying over the Alps. We do not know if they managed it, but sooner or later . . .

★ The Breggia Hang Gliding Club helped in preparing the take off at Mount Bisbino, and the Como Hang Gliding Club thanks them with all its heart.

★ Our friends from abroad were entertained in the evenings at the hotel by Stefano Bricoli's funny conjuring tricks and by a film about the 1982 Lariano Triangle Contest and flying in the Owens Valley.

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BLUEBOOK

EDITION NO. 29

The BLUEBOOK is a service of *Whole Air* magazine. The prices which appear below are designed to be *guidelines* for evaluating the worth of your glider or one you may wish to buy. We *do not* intend for these figures to be considered the final authority. *Please* consult your local qualified dealer for information pertaining to these values in your particular area. The prices *do* vary widely in differing geographical locations.

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78	Phoenix 8 Super	Reg.	575	425
	Phoenix 12	Reg.	400	400
79	Phoenix 6D	185	675	575
	Lazor I	190	700	650
80	Phoenix 6D	215	725	725
	Lazor II	175	925	725
81	Phoenix 6D	185	900	775
	Viper	180	1000	750
82	X-180	180	1375	1075
EIPPER FORMANCE				
78	Flexi III	Lg.	500	375
	Flexi III	Med.	600	525
	Cumulus 10	Med.	575	575
	Antares	Med.	800	725
79	Antares	Med.	850	650
	Antares	Lg.	725	725
ELECTRA FLYER				
78	Cirrus 5	C	425	425
	Cirrus 5	B	600	525
	Cirrus 5	A	600	575
	Olympus	160	725	600
	Olympus	180	675	475
79	Dove	A	675	525
	Cirrus 5	A	775	600
	Olympus	160	825	575
	Floater	205	800	650
80	Spirit	200	900	725
FLIGHT DESIGNS				
79	Lancer	190	775	600
	Lancer	170	850	675
80	Super Lancer	200	825	625
81	Super Lancer	175	950	650
	Demon	175	1000	825
82	Javelin	168	1125	900
	Javelin	208	1175	900
	Demon	175	1275	950
MANTA				
79	Fledge II	B	1075	675
80	Fledge II	B	1225	1100
82	Fledge III	B	1600	1450
MOYES				
78	Maxi II	200	600	500
79	Maxi III	200	725	700
80	Stingray	200	675	650
	Maxi IV	200	825	650
	Mega II	172	1075	825
81	Mega II	172	1250	1000
	Meteor	180	1175	1050
82	Missile	200	1375	1175
PROGRESSIVE AIRCRAFT				
81	Pro Air, Series I	160	1325	1200
82	ProBreez	180	1175	1100
	ProStar I	160	1400	1275

Dealers: Please contact *Whole Air* Magazine about your input to the BLUEBOOK. The figures come from collected reports of *actual sales* of used gliders in all areas. They are then averaged for purposes of simple presentation. To keep from having disparity in these prices from area to area, we need input from more dealers. Your input is welcome and will be used and appreciated. Send to the attention of BLUEBOOK.

SEAGULL				
78	Seahawk	170	550	400
	Seahawk	190	500	500
	10 Meter	---	775	750
	10.5 Meter	---	750	700
79	Seahawk	180	800	675
	10 Meter	---	900	675
	11 Meter	---	900	650
80	11 Meter	---	925	725
SEEDWINGS				
81	Sensor 510	180	1200	1175
82	Sensor 510	180	1525	1375
SKY SPORTS				
78	Osprey	175	675	400
	Sirocco II	164	700	475
79	Osprey 2	175	600	425
	Sirocco III	189	825	400
ULTRALIGHT PRODUCTS				
78	Spyder	176	800	575
	Condor	178	825	700
79	Mosquito	166	550	350
80	Firefly 2B	181	750	575
	Comet	165	1150	800
81	Gemini	164	1025	850
	Comet	165	1275	1000
	Comet	185	1350	975
82	Gemini	164	1175	1025
	Comet	165	1475	1175
	Comet	185	1500	1250
WILLS WING				
78	Alpha	185	775	575
	Alpha	215	775	600
	X-C	215	750	500
79	Alpha	185	800	675
	Alpha	215	775	650
	Omega	220	825	700
	Raven	209	925	775
80	Raven	209	950	775
	Raven	229	925	800
	Harrier	177	1075	875
81	Raven	179	1125	950
	Raven	209	1150	925
	Harrier	177	1175	1050
82	Harrier II	177	1325	1100
	Duck	160	1500	1350
	Duck	180	1425	1225
AIRWAVE GLIDERS				
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A whole new artform? Well, hardly, but Joe Wheelwright's "Playground Sculpture and Hawkperson" makes hang gliding's only motel/resort just that much more unique/by Lynda Nelson

Have you ever read this ad in the back of *Whole Air* and wondered what it was all about? I mean, what is a "Work/Fly" program anyway? What kind of people come to Chattanooga to live in a bunkhouse? What is a "bunkie?" Here is a brief look at the history of the Crystal Air Sport Motel bunkhouse, and a few days in the life of a bunkie.

Charles A. (Chuck) Toth had been a regular person in Chicago, Illinois, working a regular job and trying to be a weekend pilot. The flying was better in the mountains of Tennessee and so once a month, Chuck would make a weekend trip down to Chattanooga to go flying. The trips became even more frequent (and more of a hassle), so finally Chuck decided to give up the regular pay in the regular world and get seriously into hang gliding. Chuck and Shari bought a motel at the base of Raccoon Mountain. It was 1975.

Chuck would need help getting the place ready. He knew about the work/barter programs at a few ski resorts out west and it seemed like a good idea for a major hang gliding area. One of the buildings at his new acquisition contained two rooms, separated by a wall. No problem, just tear out a wood and plaster wall, build some bunks, and he would have the first bunkhouse for hang glider pilots. However, underneath the wood paneling, Chuck found bricks. Lots of them, all stuck together. Chuck figured he was in trouble.

"Stand back!" a noise cried. Two young men proceeded to tear the brick wall apart. The first two bunkies — Roger (Garbage Rog) Saynor and Kurt (Slob, as he was then nicknamed) Johnson — had arrived and the Bunkhouse was born.

Over the ensuing years, many pilots came to fly the Lookout and Sequatchie Valley ridges and stay at the Bunkhouse. During that time Chuck had a steady supply of painters, grass mowers, carpenters, bush trimmers, pool cleaners, kid- and motel-baby sitters, et cetera. Some came for a few days, others stayed for months at a time, but all of them came to fly in Tennessee. Of all the people who came, 170 have made Chattanooga their home, according to Chuck's records.

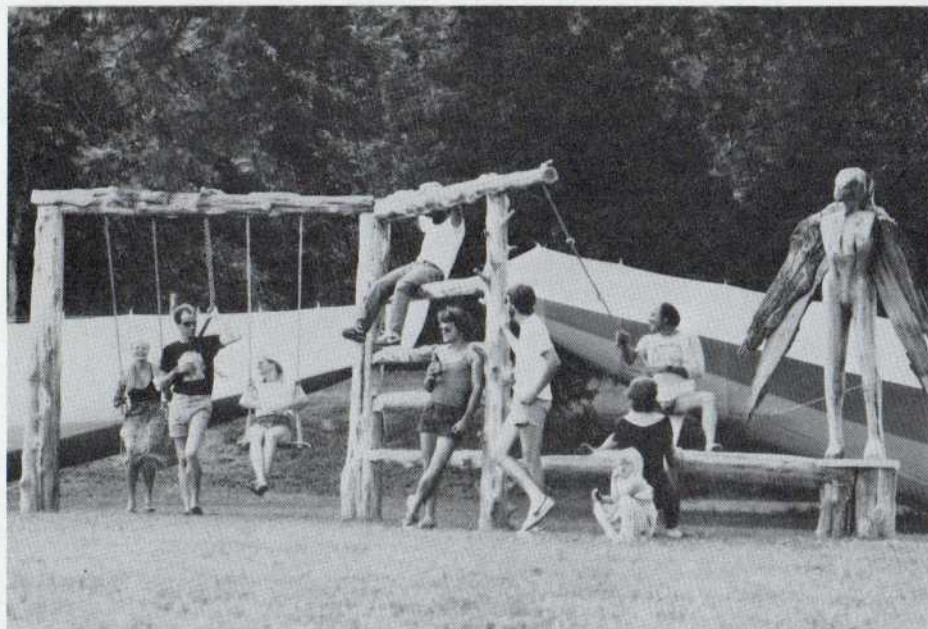
THE SCULPTOR ARRIVES

Eight years ago, up north, Joe Wheelwright saw Santa Claus arrive by hang glider. Joe was awed by the sight, and promised himself that one day, he too, would fly a hang glider. But Joe was a professional sculptor with a family, and the responsibilities of a family, combined with the unstructured but demanding life of professional art, left him with little time for such pursuits. His wife was not nearly as excited about hang gliding as he was, either.

But Joe had never forgotten his dream of one day flying, just like Santa Claus years before. Upon discovering a *Whole Air* on a magazine stand, he read about a hang gliding simulator at the Crystal Air Sports hang gliding shop down south in Chattanooga. Joe also read about Chuck and Shari's Bunkhouse and Work/Fly program in Chattanooga. Joe wrote Chuck a letter. This is it, he decided. This is the way to go. Joe Wheelwright was on his way to Chattanooga to learn how to hang glide.

Chuck had a plan to build a playground for the motel out of logs, next to motel's swimming pool. He had the logs — cedar — and he knew what he wanted, but had not found a way to build it. Then one day, a letter arrived from a person up north, a professional sculptor who carved figures from wood using a chain saw! A professional artist whose work was on exhibit at art galleries. Chuck's dream would become a reality after all. Chuck picked up Joe at the airport and for the next two weeks Joe Wheelwright, professional artist from Boston, learned to hang glide while living as a bunkie.





attention. He saw there was something unique about it and set it aside. Something about the shape of it reminded him of a person with bird-like features. Or maybe it was a bird with human characteristics. He set it upright and went to work.

Along with their varied duties, some of the bunkies became models and "Hawkperson" began to take form. The upright log acquired distinct features as Joe worked: a head with a hawk-like beak cocked to one side, long human-like legs, piercing eyes. Joe and another bunkie, Rob Lesser, worked hard every day. The logs were joined together and swing seats made and suspended on thick ropes.

Finishing touches were added to the head and torso, wings attached, and the figure became "Hawkperson." Chuck's dream had finally come true, but this was not an ordinary playground, for Joe, Chuck, and Rob had incorporated into it a wood sculpture of art.

Joe had his first mountain flight and all his dreams and fantasies of flight in a glider were fulfilled. Joe returned to his family and work in Boston, but promised to come back to Chattanooga and fly again.

LIFE GOES ON

The other bunkies? They come, they go. As for me, I was one of the models for "Hawkperson," and I call the Crystal Air Sport Motel home, too.

Excuse me, I have to go clean the pool now. §

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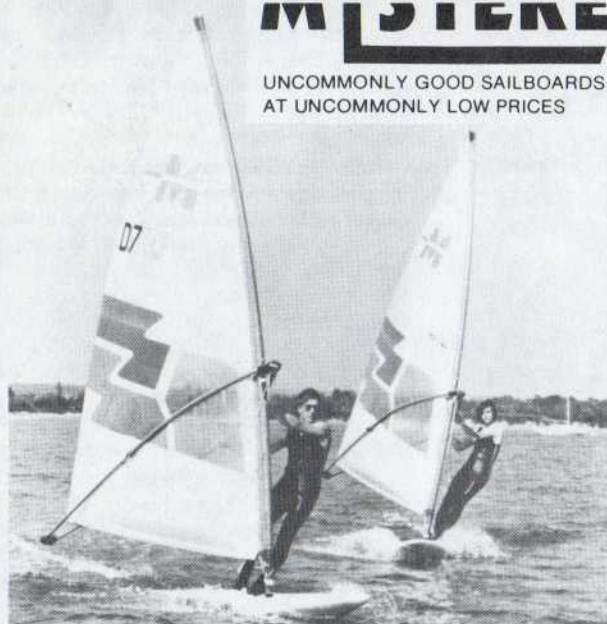
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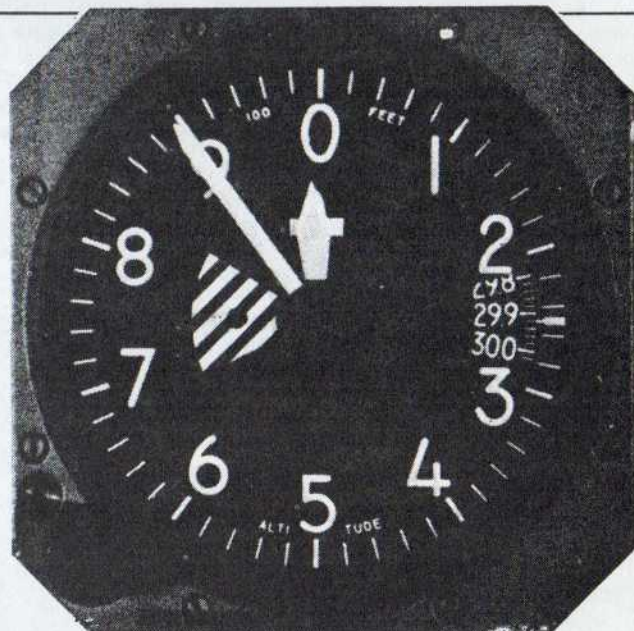
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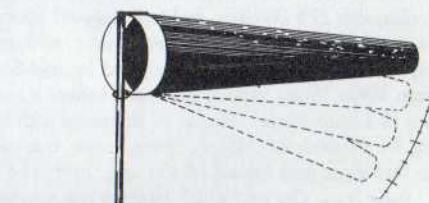
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PRODUCT LINES

CHATTANOOGA, TENN — Seems "tumble" is a word we oughta stay far away from. Got into trouble again last issue. Oh, not by tumbling. Or, perhaps it was a sort of tumble. A semantic problem, suggests Roy Haggard, but as Pete Brock of Ultralite Products says, "A tumble is a negative pitching movement." Let's leave it at that. Except the reason he rang us up was to say (referring to the Jul/Aug 83 "Product Lines") that Chris Price did not tumble the Comet 2 at Dunlap Flight Park. Brock said he dove the glider, hit a powerful thermal on the upside which yanked the bar from his hands, putting Price at the keel rear position. Throwing his chute resolved the incident into one that brought no injuries, thank God. Brock also claimed Jeff Burnett never tumbled a Comet. Had one upside down briefly, he said, till Jeff fell into the keel and deployed, again to a successful conclusion. The fact is, ANY aircraft can tumble. So can any hang glider. Saying that one can or did tumble is hardly writing its epitaph. Transmitting accident/incident material has its ups and downs (no pun intended), and from here forward, we will have a new policy when we hear of a "tumble," or other mishap. Showing our "dirty laundry" in public unless a real point exists, may only serve to frighten new entrants who read our magazine. In agreement with recent communications from *Ultralight Aircraft Magazine*, it will be *Whole Air's* goal "... to influence safety by emphasizing the positive rather than reporting the 'sensational'." Our program for tumbles, break ups or other accidents/incidents will be as follows: When we receive word of such an event, we will request a written report, so that we have quotes on file for reference. If possible, we will also request a written report from the pilot "in the cockpit." Finally, we will ask the manufacturer of the "tumbled" craft to comment. Then, and only then, will it appear in *Whole Air*, and it will run as a news item toward the front of the publication. We never admitted to, or claimed to be, perfect journalists. Good thing too, 'cause perfect we certainly are not. And especially as we're one of only two magazines left in hang gliding, we're probably wisest to leave muck-raking to experts or lawyers anyway. Enough said on this subject. Let's get on to what we're good at ... telling you about new products. In the next issue of *Whole Air*, we will have both a major advertisement and a product story on *Airwave Gliders' Magic III* from England. The glider has one of the most respected reputations in the talented European flying community. In fact, the Sept 83 *Vol Libre* (french hang gliding/ultralight magazine) said, "... the Magic III, [is] the most performing European wing of the day." With a 1983 XC Classic win (Tony Hughes — see Jul/Aug 83, pg. 40) followed by a World Class Second at the U.S. Nationals (John Pendry), another at the Tegelberg World Meet (Graham Hobson, see pg. 17, this issue), the exclusive support of the crack British World Team, and many more victories elsewhere, the Magic is certainly a glider to look over. You'll get the chance as several dealers pick up the brand following Airwave Director Rory Carter's US Tour in September. Other big product news is *Flight Designs* move from its Salinas, California location to parent company (Pioneer Int'l) headquarters in Manchester, Connecticut. We'd guess that makes F.D. the first eastern manufacturer since Chuck's Glider Supplies and Sky Sports left powerless flight for, shall we say, greener airports. The sheer financial mass of Pioneer (plus or minus \$50 million per year) allows the company to continue to offer exceptional values on their 208 Javelin, the 175 Demon, and their heavily advertised JetWing Trike. We'll have more as the locale move takes further toehold. At present, however, the Salinas facility will be closed by mid-September 1983. Lots of news from *Wills Wing*, one of the more salient items being the temporary departure of Linda Meier. Not at all unhappy with her WW work, Linda is preparing for the arrival of Mike or Linda Junior, due by stork (or Duck !?) just about as this issue gets hauled off to the printer. The Wills Wings also are proud of their "new Ducks," which besides the now familiar nose cones, also feature what they name a "plug in" keel rib. As it anchors directly to the leading edge, they say it really helps tension the trailing edge, thereby reducing the chance of flutter at almost any speed. Then, there's the *Attack Duck*. With the 180 size now certified and in production — the 160 is in the works — the newest Wills has eight extra "half ribs" in the top surface. These ribs extend from the leading edge to the rear of the double surface, and are positioned midway between each of the inboard four existing top surface ribs. Helping to

define the critical upper surface at the leading edge, they are said to extend the lower speed range and improve the low speed performance and handling. The *Attack Duck* also features stiffer ribs in the inboard section of the rear of the wing. By the time you read this, Duck prices have been increased, but the new figures were not available at press time. Refinements have also been happening at *Seedwings*, where designer Bob Trampenau has added an in-flight sail tensioning device which reporter Doug Rice felt was "highly effective." Shifting into "high" (tighter sail), Rice said the difference was easily discernible. He said it adds an important step to your preflight, as a launch in the tight mode could be very difficult, what with the trade off of glide enhancement versus handling difficulty. At the Masters, only certified gliders are allowed, so the shifter had to be "wired off." But that didn't preclude the wide use of what are commonly called french connections. While early eyewitnesses did not perform a count, it was revealed that nearly all Masters competitors are now using some version of the Ancrege Flottant. We find that curious indeed after many initial negative comments and much pooh-poohing of the first Piff Puffs (see pg. 17 this issue). More on the Masters in the Nov/Dec *Whole Air* as we will present full write ups on the '83 Nationals and Masters. But speaking of these two meets, Bill Bennett's *Streak*, with young Chris Bulger at the control bar, posted two victories. Chris won the World Class at the Nats. Bulger has also just won the Masters. In both Nat's and Masters, he flew a *Streak*, thus continuing to mount victories for the Delta Wing glider. However, official tabulations make Rick Rawlings our '83 National Champion, based on the Competition Point System and Rawlings' prior wins (since the '82 Nats). At this year's Nationals, Rick switched to an *Attack Duck*, placing a respectable Third in World Class. In his other two best performances — best three of the year are used for CPS calculations — Rick flew a *Streak*. While we're still on contests, the Canadian Nationals are over, and according to Ultralite Products September Dealer Newsletter, *Comet 2's* "swept the field." Canada's Grand Ole Man, Willi Muller took First Place, leading a pack of nine UP gliders. Our hearty congratulations to Rick Rawlings, Chris Bulger, and Willi Muller. UP has new reduced prices on their 184 Gemini, at \$1795 — the 164 and 134 Geminis remain at \$1695. And for the high performance *Comet 2*, UP has some new mylar sandwich fabric called "chameleon cloth." The composite material has dyed cloth on only the outside of the two sandwiching dacron layers. The cute name derives from the fact that at the trailing edge, the cloth has a different look when viewed from top or bottom ... hence "chameleon cloth." UP paved the way for this first (colored sandwich cloth), and amazingly, they're charging no more for it than white sandwich cloth. To wrap up this edition of "P.L.," we wish to pass along some highlights of Wills' Dealer Survey results. Forty seven businesses were included, altho a few more responded later. See how your desires and feeling match these results. In desired new products, most mentioned was a new vario and/or flight deck (from Wills). Low price was the primary feature wanted. Number Two was a new, light weight, easy-to-fly, good performing, low priced, beginner/intermediate glider. Third was a general desire for gliders lighter in weight, and for more information or developmental work on towing. In explaining their efforts on these projects, the report also says, "Based on what we have seen in the last year, we feel that a revitalization of the entry level of our sport is necessary..." We heartily agree! *Whole Air* is planning to send out a letter later this fall, asking all manufacturers and the bigger retailers if we can all meet in Southern California after the Christmas Holidays. We would like to initiate a conference on "Revitalizing Hang Gliding." We hope this will be better received than our *Oshkosh Letter*. In that communication well prior to the EAA's giant Convention, we tried to rally all manufacturers of gliders to share a small booth with *Whole Air*. We wanted to reach out to the flight-interested public (damn near none of whom fly hang gliders at present). With a claimed [1983] gate count of 825,000 bodies, surely a few could have been motivated to try hang gliding, or at least they might've left properly informed. But, rather sadly we feel, NOT ONE MANUFACTURER even acknowledged receiving our letter ... let alone responded to it ... much less agreed to participate. Hmmm? Got news or opinions? Send 'em to *Product Lines*, Box 144, Lookout Mtn., TN 37350.



THE DREAM

AS LONG AS MAN HAS WALKED THE FACE OF THIS EARTH, HE HAS DREAMED OF FLYING. WE LIVE IN A TIME WHEN IT HAS BECOME POSSIBLE, AND IT IS, WITHOUT QUESTION, ONE OF THE MOST OUTSTANDING ACCOMPLISHMENTS OF MAN. TRUE, WE HAVE GONE TO THE MOON AND BEYOND, BUT SOARING FLIGHT IS STILL THE UNIVERSAL SYMBOL OF FREEDOM OF MIND AND SPIRIT. IT'S NO WONDER, THAT THE SPORT OF HANG GLIDING HAS CAPTURED THE INTEREST OF SO MANY.

WE AT DELTA WING HAVE FASHIONED A NEW SET OF WINGS TO MEET THE CHALLENGE, AND BRING MANS OLDEST DREAM WITHIN THE GRASP OF ANYONE WILLING TO TRY. WE HAVE NAMED THIS AMAZING COMBINATION OF DACRON AND ALUMINUM, THE DREAM, AND RIGHTLY SO. THIS REMARKABLY CLEAN HANG GLIDER HAS THE LIGHT WEIGHT, BALANCE, RESPONSE, COORDINATION OF PITCH AND ROLL, LAUNCH, SOARING AND LANDING GRACE NECESSARY, TO BRING THE BEGINNING AND INTERMEDIATE PILOT WELL INTO THE REALM OF ADVANCED FLIGHT. THIS IS NO FADING HIGH PERFORMANCE GLIDER THAT HAS BEEN CUT DOWN FOR THE SAKE OF CHEAPER MANUFACTURE AND DESIGN ECONOMY, RATHER, IT IS TOTALLY NEW TO THE HANG GLIDING WORLD, AND BUILT TO WITHSTAND THE WINDS OF CHANGE.

SEE IT AT YOUR DELTA WING DEALER. HE'LL BE PROUD TO SHOW YOU THIS OUTSTANDING FLYING MACHINE, OR CALL "UNCLE BILL" AND FIND OUT FOR YOURSELF WHAT DREAMS ARE MADE OF.

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